



PUNJAB POLICE
RECRUITMENT OF CONSTABLES
IN TECHNICAL AND SUPPORT SERVICES CADRE -2021

Advt. No. 06 of 2021

Date of Publication: 9th September, 2021

IMPORTANT DATES & INFORMATION	
Recruitment Portal for submission of Online Application and for recruitment related information	https://iur.ls/punjabpolicerecruitment2021
Punjab Police Website	www.punjabpolice.gov.in
Opening Date and Time for Submission of Online Application	09:00:00 on 9 th September, 2021
Closing Date and Time for Submission of Online Application	23:59:59 on 29 th September, 2021
Helpline Number (Toll-free)	18002102565
Grievance window (for resolving problems faced by candidates) shall be available on the portal https://iur.ls/punjabpolicerecruitment2021	



1. INTRODUCTION

- 1.1 Online Applications are invited from Technically qualified candidates for filling up 2340 vacancies of Constables in the Technical and Support Services (TSS) Cadre of Punjab Police by way of direct recruitment.
- 1.2 The recruitment shall be carried out in the rank of Constable, both male and female, including recruitment against 3% posts reserved for Sportspersons in the Technical and Support Services Cadre of Punjab Police.
- 1.3 The process of recruitment shall be carried out in accordance with the provisions of **Standing Order No. 06 of 2021**, the copy of which is available on the Punjab Police official website.

2. POSTING/ DEPLOYMENT

- 2.1 Selected candidate(s) can be posted/ deployed for duty anywhere in State of Punjab, or outside the State anywhere in India.
- 2.2 All newly selected candidates shall be subject to the relevant provisions of the Punjab Police Act, 2007, Punjab Police Technical and Support Services (PPTSS) Cadre Group-C Service Rules 2021, and other rules and instructions issued/ laid down by the Punjab Government/ Punjab Police from time to time, with the aim to ensure efficiency, transparency, fair dealing, accountability in public dealing and police functioning including the:
 - (i) Initial Placement/ Deployment,
 - (ii) Posting and Transfer Policy, and
 - (iii) Tenure Policy



3. TENTATIVE VACANCIES OF CONSTABLES (Group C)

Category	No. of Vacancies	
	Open	Women
General Category (GC)	688	273
Scheduled Castes (SC)	280	187
Backward Class (BC)	141	93
Ex-servicemen (General)	70	93
Ex-serviceman (Scheduled Castes)	94	0
Ex-servicemen (BC)	47	0
Wards of Police Personnel	31	15
Economical Weaker Section (EWS)	164	70
Freedom Fighter	16	7
Sports (GC)	23	24
Sports (SC)	24	0
Total	1578	762
Grand Total	2340	

Note: The number of vacancies may be increased or decreased by the Punjab Government/ Punjab Police at any time before the completion of the recruitment process, without giving any prior notice to the candidates.

4. RESERVATION POLICY

4.1 The Punjab Government instructions regarding reservations for Scheduled Castes/ Scheduled Tribes, Backward Classes, Ex-Servicemen (including wife/ a dependent child of Ex-Servicemen, where applicable), Wards of Freedom Fighters, Wards of Punjab



- Police Personnel, Economically Weaker Sections (EWS), Women and Sportspersons shall be strictly followed.
- 4.2 The reservation for Scheduled Castes and Backward Classes shall be strictly implemented in accordance with the Punjab Scheduled Castes and Backward Classes (Reservation in Services) Act, 2006, as amended from time to time and the existing instructions of the Punjab government in this regard.
 - 4.3 The reservation for Ex-serviceman/ wife or dependent child of an Ex-serviceman shall be implemented in accordance with the Punjab Recruitment of Ex-Servicemen Rules, 1982, as amended from time-to-time and the existing instructions of the Punjab Government in this regard.
 - 4.4 The personnel of Central Para-Military Forces (BSF, CRPF, ITBP, CISF, SSB etc.), Assam Rifles, GREF, DSC and Indian Coast Guard are not eligible to be considered under the Ex-Servicemen category.
 - 4.5 The persons serving in the Armed Forces of the Union, who, have one year or less before the completion of specified terms of engagement, and who, on retirement from the Service would come under the category of 'Ex-Serviceman', shall be permitted to apply for this recruitment.
 - 4.6 The reservation for Economically Weaker Section (EWS) shall be implemented in accordance with the Punjab Govt. Department of Social Justice, Empowerment and Minorities (Reservation Cell) instructions issued vide letter no. 1/3/2019-RC1/700 dated 30.10.20.
 - 4.7 The reservation for Women shall be implemented in accordance with the instructions of Punjab Department of Social Security, Women and Child Development (Social Security Branch) notification no. G.S.R.87/Const/Arts 309 and 15/2020 dated 21.10.20.



- 4.8 The reservation for Wards of Freedom Fighters shall be implemented in accordance with the instructions issued by Punjab government from time to time.
- 4.9 The reservation for Wards of Police Personnel shall be implemented in accordance with the instructions issued by Department of Home Affairs & Justice, Government of Punjab vide No.1(211)94-2H(I)/10176 dated 11.6.1996.
- 4.10 The reservation for Sportspersons shall be implemented in accordance with the Punjab Recruitment of Sportsmen Rules, 1988, instructions issued vide letter No. 20/4/86-Sppl/13204 dated 10.07.1989 and amendments issued from time to time from Department of Personnel and Administrative Reforms, Government of Punjab.
- 4.11 Applicants claiming reservation under Sportspersons Category must submit Resident Certificate from the competent authority, failing which would result in cancellation of their candidature.

5. RECRUITMENT IN 20 DOMAINS AND SPECIALIZATIONS/ FUNCTIONS

- 5.1 The recruitment to the rank of Constable in TSS cadre is being conducted across 20 Domains and Specializations/ Functions, the list of which is as given below:



S. No.	Domain	Specialization/ Function	Number of Candidates to be selected	
1	Information Technology Services (IT)	Grouping 1	Cyber Security	25
2			Geographical Information System (GIS)	10
3			Data Mining	22
4			OSINT Analysis	25
5			Network Management	85
6		Grouping 2	Data Analytics	505
7			Wireless & Telecommunications	150
8			Website Administration	10
9			Computer/ Digital Forensic Analysis	12
10		Grouping 3	System Administration	120
11			Programming/ Coding	100
12			Database Administration	100
13			IT Support	118
14			Cyber Crime	100
15	Community & Victim Support and Counselling Services	Community & Victim Support	382	
16		Community Counselling	38	
17	Forensic Sciences (FS)	Forensic Analysis	81	
		Computer/ Digital Forensic Analysis	12*	
18	Human Resource Management	Human Resource Management	60	



S. No.	Domain	Specialization/ Function	Number of Candidates to be selected
19	Legal Services	Legal Support	382
20	Road Safety and Regulation	Road Safety and Regulation	15
Total (*The number of candidates reflected at S. No. 17 have not been counted in arriving at the total as these have already been accounted for at S. No. 9)			2340

5.2 Applying in multiple Specializations/ Functions

Candidates are required to apply for any one of the Six Domains available. In every Domain, candidates have the option of applying in multiple Specializations/ Functions, the details of which are as given below:

5.2.1 In case the candidate applies in the Information Technology Services (IT) Domain, (s)he shall have the option to apply in maximum of three Specializations in the Information Technology Services (IT) Domain, selecting not more than one Specialization from each of the three Groupings 1, 2 & 3 provided therein.

5.2.2 In case the candidate applies in the Community & Victim Support and Counselling Services Domain, (s)he shall have the option to apply in maximum of two Specializations of Community & Victim Support and Counselling Services.

5.2.3 In case the candidate applies in the Forensic Sciences Domain, (s)he shall have the option to apply in maximum of two Specializations of Forensic Analysis and Computer/ Digital Forensic Analysis.

5.3 Candidates are required to apply in minimum one Specialization/ Function. However, applying in multiple Specializations/ Functions



may increase their chances of selection as the cut off for each Specialization/ Function may be different depending upon the number of candidates to be selected in that Specialization/ Function and the number of candidates applying for that Specialization/ Function.

6 PAY SCALE

6.1 The pay for the post of Constable shall be as below:

Name of the Post	Scale of Pay
Constable	Rs. 19900/-

6.1.1 As per the instructions issued by the Department of Finance, Government of Punjab vide Notification No. 7/204/2015-4FP1/66 dated 15.01.2015 and No. 7/204/2015-4FP1/853793 dated 04.10.2016, during the probation period of 3 years, minimum pay admissible will be paid and there will be no entitlement of annual increment and any other allowances except travelling allowance.

6.1.2 On receipt of the report of 6th Pay Commission, there will be no revision in this pay matrix.

7 ESSENTIAL ELIGIBILITY REQUIREMENTS FOR CANDIDATES

7.1 The candidate shall be a citizen of India.

7.2 AGE

7.2.1 The minimum and the maximum age of recruitment for Constables shall be 18 years and 28 years respectively as on 1st January, 2021.

7.2.2 Relaxation in the upper age limit in case of Scheduled Castes/ Scheduled Tribes, Backward Classes and Government employees shall be as laid down by the Punjab Government.



7.2.3 Ex-Servicemen shall be given relaxation in the upper age limit by 3 years plus the number of years of service rendered in the Indian Defence Forces. In accordance with Punjab Govt. instructions issued vide No. G-S-R-11/Const./Arts, 309, 234 & 318/82 dated 02.02.1982, where an Ex-Servicemen is not available for recruitment against a reserved vacancy, such a vacancy shall be reserved to be filled in by recruitment of the wife or one dependent child of an Ex-Serviceman who has not been recruited against a reserved vacancy as prescribed under the Punjab Recruitment of Ex-Servicemen Rules 1982. Provided further that the wife or the dependent child of the Ex-Serviceman shall be recruited against the reserved vacancy subject to the conditions that:

7.2.3.1 (s)he possesses the prescribed qualifications and is within the prescribed age limits;

7.2.3.2 (s)he is not already in service;

7.2.3.3 (s)he will be eligible to avail the benefit only once in life.

7.3 **PHYSICAL STANDARDS**

Candidate	Minimum Height required
Male	5' 4" (5 feet 4 inches)/ 162.56 cm
Female	5' (5 feet)/ 152.4 cm

7.4 **EDUCATIONAL QUALIFICATIONS**

7.4.1 The minimum educational qualification shall be Graduation or its equivalent from a recognized University in any of the disciplines mentioned below. The educational qualifications required for different Domains/ Specialization **for candidates**



other than Ex-Servicemen but including their Lineal Descendants are as given in the table below:

S. No.	Domain	Specialization/ Function	Minimum Educational Qualifications	
1	Information Technology Services (IT)	Cyber Security	<ul style="list-style-type: none">• Bachelors (Minimum 3 years)/ Masters (Minimum 2 years) degree in the fields of:<ul style="list-style-type: none">○ Computer Science, or○ Electronics, or○ Instrumentation, or○ Communications, or○ Information Technology, or○ Mechatronics, or○ Computer Applications, or○ Data Sciences, or○ Computer Sciences and allied fields* from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC; or	
2		Geographical Information System (GIS)		
3		Data Mining		
4		Network Management		
5		Data Analytics		
6		Wireless & Telecommunications		
7		Website Administration		
8		Computer/ Digital Forensic Analysis		
9		System Administration		
10		Programming/ Coding		<ul style="list-style-type: none">• Associate Member of the Institution of Engineers (AMIE) (Section A and B) in Computer Science.
11		Database Administration		
12		IT Support		
13		Cyber Crime		
14			OSINT Analysis	<ul style="list-style-type: none">• Bachelors Degree in any field, and• Minimum 1-year diploma/ course in OSINT/ related platforms from any University/ Institution recognised by Central/ State Government and/ or approved by



S. No.	Domain	Specialization/ Function	Minimum Educational Qualifications
			AICTE/ UGC.
15	Community & Victim Support and Counselling Services	Community & Victim Support	Bachelors/ Masters Degree in Psychology/ Sociology/ Social work from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
16		Community Counselling	Bachelors/ Masters Degree in Psychology from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
17	Forensic Sciences (FS)	Forensic Analysis	Bachelors/ Masters Degree in Forensic Science from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
		Computer/ Digital Forensic Analysis **	Bachelors/ Masters Degree in Forensic Science from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
18	Human Resource Management	Human Resource Management	Bachelors/ Masters Degree in Management/ Commerce from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
19	Legal Services	Legal Support	Bachelors/ Masters Degree in Law from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC.
20	Road Safety and Regulation	Road Safety and Regulation	<ul style="list-style-type: none">• Bachelors/ Masters Degree in Civil Engineering from any University/ Institution recognised by Central/ State Government and/ or approved by AICTE/ UGC; and• Minimum one-week course



S. No.	Domain	Specialization/ Function	Minimum Educational Qualifications
			recognised by Ministry of Road Transport and Highways/ IRC on Road Safety from IIT/ NIT/ CRR/ Indian Academy of Highway Engineers or from any Institute recognised by the Ministry.

* The decision of the Board regarding which field of education can be considered as allied field to Computer Sciences shall be final and no counter claim and/ or appeal shall be allowed.

** Candidates applying for Computer/ Digital Forensic Analysis can apply for either of the Information Technology Services (IT) Domain or Forensic Sciences (FS) Domain.

7.4.2 In case of Ex-Servicemen (excluding their Lineal Descendants), the minimum educational qualification shall be Graduation. The Degree of Graduation conferred by the Services shall be valid in this regard to apply for all the Domains and Specializations/ Functions.

7.4.3 [Requirement of Knowledge of Punjabi Language](#)

7.4.3.1 The candidate must have passed Matriculation examination with Punjabi as one of the compulsory or elective subjects or any other equivalent examination in Punjabi language, as per Rule 8 of Punjab Police Technical and Support Services Cadre (PPTSSC) Group-C Service Rules, 2021 shall be applicable in this regard.

7.4.3.2 As per the Punjab Government Notification No. GSR-33/Const./Art 309/94 dated 4th of May, 1994:



7.4.3.2.1 where a War Hero, who has been discharged from Defence Services or paramilitary forces on account of disability suffered by him or his widow or dependent member of his family, is appointed under the instructions issued in this behalf by the Government, the person so appointed will not be required to possess aforesaid knowledge of Punjabi Language;

7.4.3.2.2 where a ward of Defence Service Personnel, who is a bona fide resident of Punjab State, is appointed by direct recruitment, (s)he shall have to pass an examination of Punjabi Language equivalent to matriculation Standard or (s)he shall have to qualify a test conducted by the Language Wing of the Department of Education of Punjab Government within a period of two years from the date of his/ her appointment.

7.4.4 The candidate must have attained the required educational qualifications on or before the date of publication of this advertisement. However, the candidates who have appeared in the final exams of the qualifying examination, as on date of publication of this advertisement but are awaiting final results, may also apply, but their candidature shall be subject to their producing the Pass Certificate of the qualifying examination, in original, at the time of Document Scrutiny.



7.5 APPLYING IN SPORTSPERSONS CATEGORY

7.5.1 The sports achievements for which the candidate is applying will be considered for evaluation in the following Sport/ discipline:

S. No.	Discipline
1	Archery
2	Aquatics
3	Athletic
4	Basketball
5	Body Building
6	Boxing
7	Football
8	Gymnastics
9	Handball
10	Hockey
11	Judo
12	Kabaddi (National Style)
13	Shooting
14	Taekwondo
15	Volleyball
16	Water Sports (Rowing, Kayaking, Canoeing)
17	Weightlifting
18	Wrestling



S. No.	Discipline
19	Wushu
20	Yoga

7.5.2 The candidates will be awarded marks (maximum 50 marks) of their sports achievements only for those disciplines in which they have applied for recruitment as per the following levels/ criteria/ parameter:

7.5.2.1 [Olympics Games](#)

Gold Medal	50 marks
Silver Medal	48 marks
Bronze Medal	46 marks
Participation	40 marks

7.5.2.2 [World Cup/ World Championship \(After 4 Years\)](#)

Gold Medal	45 marks
Silver Medal	43 marks
Bronze Medal	41 marks
Participation	35 marks

7.5.2.3 [Asian Games](#)

Gold Medal	40 marks
Silver Medal	38 marks
Bronze Medal	36 marks



Participation	32 marks
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7.5.2.4 [Commonwealth Games/ World Championships \(2 years\)](#)

Gold Medal	35 marks
Silver Medal	34 marks
Bronze Medal	33 marks
Participation	31 marks

7.5.2.5 [Asian Championship/ Asian Track & Field/ Commonwealth Championship](#)

Gold Medal	32 marks
Silver Medal	31 marks
Bronze Medal	30 marks
Participation	28 marks

7.5.2.6 [SAF Games/ World University Games/ Junior World Cup/ Junior World Championship/ Junior Asian Championship](#)

Gold Medal	28 marks
Silver Medal	27 marks
Bronze Medal	26 marks



7.5.2.7 [National Games/Senior National Championships/
Inter-State Championships](#)

Gold Medal	25 marks
Silver Medal	24 marks
Bronze Medal	22 marks

7.5.2.8 [All India Inter-University/ Junior National
Championships \(Under-19 & above age-group only\)](#)

Gold Medal	20 marks
Silver Medal	18 marks
Bronze Medal	16 marks

7.5.2.9 [Punjab Senior State Championship/ Inter District
Senior Championship](#)

Gold Medal	15 marks
Silver Medal	14 marks
Bronze Medal	12 marks

7.5.2.10 [Punjab Junior State Championship/ Inter District
Junior Championship \(Under-19 & above age- group
only\)](#)

Gold Medal	10 marks
Silver Medal	08 marks
Bronze Medal	06 marks



- 7.5.3 The sports certificates of candidates of only those competitions will be considered which are organized on or before the date of submission of Application Forms.
- 7.5.4 Only the marks of that one highest medal/ position or level of participation in which a candidate is getting maximum marks as per the table given above will be considered.
- 7.5.5 If any candidate has secured more than 1 medal in a competition, in that case (s)he shall be awarded marks for only one highest medal/ position secured in the competition.
- 7.5.6 An attested copy of Gradation Certificate strictly in accordance with the Punjab Sportsman Rules, 1988 as amended on 20.07.2020 issued by the competent authority needs to be attached with the Application Form.
- 7.5.7 Director Sports, Punjab is the competent authority to issue Sports Gradation certificate and any other Sports Certificate issued by any other authority shall not be accepted as a valid Certificate for claim of reservation under the Sportspersons Category.

8 SELECTION PROCESS

- 8.1 The Selection Process shall be conducted in 2 phases, viz., Phase-I (Test 1 and Test 2) and Phase-II (Physical Measurement Test, the Physical Screening Test and Document Scrutiny).
- 8.2 For the candidates applying under the category of Sportspersons, the Selection Process shall include additional eligibility check through the Central Recruitment Board for the recruitment of Sportspersons constituted by the DGP Punjab vide office memo no. 7805-19/E-1(4) dated 05.07.2021 in order to be considered against Sportspersons category.
- 8.3 The following shall be the constituents of the Selection Process:



- 8.3.1 Test 1 (Computer Based Test (CBT))
 - 8.3.2 Test 2 (Computer Based Test (CBT))
 - 8.3.3 Eligibility check of Sports achievements (only for Sportspersons)
 - 8.3.4 Physical Measurement Test (Qualifying)
 - 8.3.5 Physical Screening Test (Qualifying)
 - 8.3.6 Document Scrutiny
- 8.4 The candidates qualifying in Phase-I (Test 1 and Test 2), based on a pre-determined cut off of marks, shall be eligible to appear in Phase-II (Physical Measurement Test, Physical Screening Test and Document Scrutiny), the venue(s) of which shall be communicated to the shortlisted candidates separately.

9 **EXAMINATION SCHEME**

S. No.	Test Component	Marks allotted	Nature of Test
1	Test 1 [Computer Based Test]	100	Merit
2	Test 2 [Computer Based Test]	100	Merit
3	Eligibility check of Sports achievements (only for Sportspersons)	---	Qualifying

9.1 **Phase-I (Test 1)**

9.1.1 Test 1 shall be a Computer Based Test (CBT). The objective of Test 1 is to check the knowledge of candidate(s) about the world and Indian history, geography, current affairs and other related areas. The questions would also test the candidates' quantitative and numerical aptitude, logical reasoning, knowledge about English language fundamentals, grammar and composition, etc., alongwith the use of computers and IT/ ITES, basic computing skills, etc.



9.1.2 Test 1 shall be Objective type in English/ Punjabi medium with multiple choice answers totalling of 100 marks and shall be of 2 hours duration having following components:

9.1.2.1 20 marks: Questions shall be from general knowledge including world history, geography, economics, science, environmental science, current affairs, Indian polity, constitution of India, basic knowledge of laws, international affairs, etc.

9.1.2.2 30 marks: Questions shall test quantitative aptitude, logical reasoning, numerical aptitude, etc.

9.1.2.3 30 marks: Questions in this section shall test the overall knowledge of English language, precis, comprehension and translation from Punjabi to English and vice-versa. Indicative topics will be: spelling correction, adjectives, improvement, idioms and phrases, verbs, fill in the blanks, synonyms/ antonyms, grammar, one-word substitution, verbal comprehension passage, detecting mis-spelt words, passage, clauses, spot the error, vocabulary, sentence structure, analyzing precis, translation from Punjabi to English.

9.1.2.4 20 marks: Questions shall test the basic knowledge of computers and information technology, computer hardware, MS-Office, common operating systems and internet concepts.

9.1.3 There shall be a negative marking of 25% of the marks for each wrong answer given.

9.2 **Phase-I (Test 2)**

9.2.1 Test 2 shall be a Computer Based Test (CBT) in form of an objective type Test in English/ Punjabi medium with multiple



choice answers totalling of 100 marks and shall be of 2 hours duration. The questions will test the core competence of the candidate in the domain knowledge of the respective Domain(s)/ Specialization(s), including those involving hands on testing of the candidate on a computer on the subject matter of the specific Domain/ Specialization. The question paper for the Test 2 shall be separate for each Domain/ Specialization. The detailed syllabus for each Domain/ Specialization of Constables is given at the end of this document.

9.2.2 The candidates shall appear separately in Test 2 for all such Domain(s)/ Specialization(s) as applied by them at the time of registration. The candidates applying under Sportspersons category shall also be required to appear in Test 2 for at least one such Domain(s)/ Specialization(s) as applied by them at the time of registration. Out of the candidates applying under Sportspersons category, only those candidates shall be considered against Sportspersons category who are declared qualified in the eligibility check as mentioned in clause 8.2 hereinbefore.

9.2.3 There shall be a negative marking of 25% of the marks for each wrong answer given.

9.3 **Evaluation Process**

9.3.1 For the purpose of shortlisting the candidates for Phase-II, the marks obtained by the candidates in Test 2, separately for each Domain/ Specialization in which they have appeared, shall be added to the marks obtained by them in Test 1, and thereafter the candidates shall be arranged in descending order of aggregate of marks obtained in Test 1 and Test 2, separately for each Domain/ Specialization, out of a total of 200 marks.



The candidates appearing in multiple Domains/ Specializations shall be considered as many times separately for each such Domain/ Specialization.

9.3.2 [Normalization of Marks](#)

9.3.2.1 If any of Test 1 and/ or Test 2 for any Domain/ Specialization is/ are conducted on different dates and/ or shifts, and/ or with different sets of questions, and/ or for different sets of participants, Normalization of scores shall be carried out using the Mean Standard Deviation method using the following formula:

9.3.2.2 Normalized marks of jth candidate in ith shift, i.e. \widehat{M}_{ij} , is given by:

$$\widehat{M}_{ij} = \frac{\bar{M}_t^g - M_q^g}{\bar{M}_{ti} - M_{iq}} (M_{ij} - M_{iq}) + M_q^{gm}$$

\widehat{M}_{ij} = Normalized marks of jth candidate in ith shift.

\bar{M}_t^g = is the average marks of top 0.1% of the candidates considering all shifts (number of candidates will be rounded-up).

M_q^g = is the sum of mean and standard deviation marks of the candidate in the examination considering all shifts.

\bar{M}_{ti} = is the average marks of top 0.1% of the candidates in the ith shift.

M_{iq} = is the sum of mean marks and standard deviation of the ith shift.

M_{ij} = is the actual marks obtained by the jth candidate in ith shift.

M_q^{gm} = is the sum of mean marks of candidates in the shift having maximum mean and standard deviation of marks of candidates in the examination considering all shifts.



9.3.2.3 Calculation of marks will be done up to 5 decimal places.

9.3.3 [Minimum cut off of Marks](#)

9.3.3.1 The candidates must obtain a pre-determined cut off of marks, viz., 10% for the candidates from Scheduled Castes/ Scheduled Tribes/ Backward Class/ Ex-Servicemen (General)/ Ex-Servicemen (Scheduled Castes)/ Ex-Servicemen (Backward Class)/ Economically Backward Sections/ Sportspersons (General)/ Sportspersons (Scheduled Castes) and 15% for all remaining categories, in the aggregate marks obtained in Phase-I (Test 1 and Test 2), separately for each Domain/ Specialization in which they have appeared, as calculated in clause 9.3.1 above, in order to be qualified and shortlisted for Phase-II.

9.3.3.2 The candidates appearing in multiple Domains/ Specializations shall be considered as many times separately for each such Domain/ Specialization based on the aggregate of marks obtained in Test 1 and Test 2, separately for each Domain/ Specialization.

9.3.3.3 These qualifying candidates shall be eligible to appear in Phase-II (Physical Measurement Test, Physical Screening Test and Document Scrutiny), the venue(s) of which shall be communicated to the shortlisted candidates separately.

9.4 **Phase-II (Physical Measurement Test, Physical Screening Test and Document Scrutiny)**

Candidates called for Phase-II of the selection process would be required to report on the designated date(s) and time at the place as intimated on the Recruitment Portal.



9.4.1 [Physical Measurement Test](#)

9.4.1.1 No marks will be assigned to this Physical Measurement Test (PMT) and shall only be of qualifying nature.

9.4.1.2 Only those candidates who qualify in the marks obtained in Phase-I, based on a pre-determined cut off of marks, shall be screened for height in the Physical Measurement Test.

9.4.1.3 The minimum height required is as given below:

Candidate	Minimum Height required
Male	5' 4" (5 feet 4 inches)/ 162.56 cm
Female	5' (5 feet)/ 152.4 cm

9.4.1.4 All such eligible candidates who have been found to be of requisite height shall qualify to be put through a Physical Screening Test (PST).

9.4.2 [Physical Screening Test](#)

9.4.2.1 The candidates shall be required to appear in the Physical Screening Test (PST) in the order of events as mentioned below and PST shall be of qualifying nature with no marks assigned. The candidate shall be allowed to participate in an event only upon being declared successful in the previous event, sequenced as below:

- For Male Candidates (except Ex-Servicemen)
 - 1200 Meters Race to be completed in 09 minutes. (only one chance)
 - Long Jump 2.00 Meters. (3 chances)
 - High Jump 0.70 Meters. (3 chances)
- For Male Candidates (Ex-Servicemen)



- For Candidates of age up to and including 35 years
 - 1400 Meters Walk and Run to be completed in 12 minutes (only one chance)
 - 08 Full Squats.
- For Candidates of age more than 35 years
 - 1400 Meters Walk and Run to be completed in 15 minutes (only one chance)
 - 05 Full Squats.
- For Female Candidates (except Ex-Servicewomen)
 - 800 Meters Race to be completed in 06 minutes. (only one chance)
 - Long Jump 1.50 Meters. (3 chances)
 - High Jump 0.50 Meters. (3 chances)
- For Female Candidates (Ex-Servicewomen)
 - For Candidates of age up to and including 35 years
 - 700 Meters Walk and Run to be completed in 07 minutes (only one chance)
 - 05 Full Squats.
 - For Candidates of age more than 35 years
 - 700 Meters Walk and Run to be completed in 09 minutes (only one chance)
 - 03 Full Squats.

Note: *A candidate must qualify in all the above events. Failure to qualify in any one of the above events of Physical Screening Test shall disqualify the candidate.*

9.4.3 [Appeals Relating to Physical Measurement Test \(PMT\) and the Physical Screening Test \(PST\)](#)

9.4.3.1 Any candidate aggrieved by the result of being declared not qualified in Physical Measurement Test (PMT) and/



or Physical Screening Test (PST), may prefer an appeal, if (s)he so desires.

9.4.3.2 Any such appeal shall be made to the Chairperson of the Recruitment Sub-Board concerned or the Appellate Authority as designated by the Chairperson, present on Physical Measurement Test (PMT)/ Physical Screening Test (PST) venue on the same day, before the proceedings of the day are over.

9.4.3.3 The decision of the Chairperson/ Appellate Authority on such appeal(s) shall be final and no further appeal or representation in this regard shall be entertained.

9.4.4 [Document Scrutiny](#)

9.4.4.1 The candidates shall be required to bring their original certificates/ documents submitted online alongwith the Application form, for the purpose of scrutinizing, alongwith at least one self-attested photocopy of each.

9.4.4.2 Candidates shall be required to bring the following certificates in original along with one self-attested copy of each document:

9.4.4.2.1 Matriculation certificate for proof of age.

9.4.4.2.2 Graduation degree and/ or relevant degrees or their equivalent from a recognized Education Board/ University.

9.4.4.2.3 Proof of having passed Punjabi at Matriculation level or equivalent.

9.4.4.2.4 Certificate issued by the Competent Authority to support claim for reserved category, including Sports and Ex-Servicemen.



9.4.4.2.5 No Objection Certificate (NOC) from the Head of Department/ Office concerned, in case of serving government employees.

9.4.4.3 The candidate shall be responsible for the originality of documents produced. Any document found false or fabricated will attract disqualification from recruitment process and at any stage of service shall result in strict administrative and/ or penal action.

9.4.4.4 Only those candidates who are declared cleared in the Document Scrutiny shall be considered for preparation of the Interim Merit List.

9.5 **Preparation of Interim Merit List**

9.5.1 From amongst the candidates who qualify the Phase-II (Physical Measurement Test (PMT), Physical Screening Test (PST) and Document Scrutiny), the Interim Merit List shall be drawn on basis of the aggregate marks out of 200 marks, as calculated in clause 9.3.1 hereinbefore. The candidates appearing in multiple Domains/ Specializations shall be considered as many times separately for each such Domain/ Specialization based on the aggregate of marks obtained in Test 1 and Test 2, separately for each Domain/ Specialization.

9.5.2 In the event of two candidates securing equal aggregate marks, the following Tie resolution criteria shall be adopted:

9.5.2.1 In the event of two or more candidates having equal aggregate marks, the candidate having higher marks in Test 2 shall be put higher in the Interim Merit List.

9.5.2.2 In the event of two or more candidates having equal aggregate marks and equal marks in Test 2, then their relative merit in the Interim Merit List shall be prepared on the basis of Percentage of Marks obtained in the



qualifying graduation examination and the candidate having higher Percentage of Marks in the same shall be placed higher in the merit in the Interim Merit List.

9.5.2.3 In the event of two or more candidates having equal aggregate marks, equal marks in Test 2 and having same percentage of marks obtained in the qualifying graduation examination, the candidate senior in age shall be put higher in the Interim Merit List.

9.5.2.4 In the event of two or more candidates having equal aggregate marks, equal marks in Test 2, having same percentage of marks obtained in the qualifying graduation examination and having same date of birth, the candidates shall be placed in the Interim Merit List in the alphabetical order of their 'First Name'.

9.6 **Preparation of the Selection List**

9.6.1 For preparation of Selection List, the Reservation roster shall be applied as per the State Government instructions on the combined merit list and not on the individual Domains/ Specializations. The candidates shall be selected in their respective Reservation categories and shall be allocated to a particular Domain/ Specialization as per their overall merit prepared on the basis of aggregate marks of Test 1 and Test 2 as prepared in clause 9.5.1 hereinbefore.

9.6.2 As and when a Reservation Category and/ or Domain/ Specialization gets filled up completely, further selection to that Reservation Category and/ or Domain/ Specialization shall be discontinued.

9.6.3 Firstly, the vacancies of General (unreserved), Ex-Servicemen (General) and Sportspersons (General) category shall be filled up simultaneously out of the candidates belonging to all the



categories on the basis of their merit. Secondly, the vacancies of different Reserved categories including Sportspersons (SC) shall be similarly filled up simultaneously out of the candidates belonging to the respective Reserved category based on the overall merit.

9.6.4 Once a candidate has been selected and allocated a Domain/ Specialization, (s)he shall not be considered for selection against remaining Domain(s)/ Specialization(s) in which (s)he may have appeared.

9.6.5 In case of a candidate who has appeared in more than one Specialization in any Domain in Test 2 and gets equal aggregate marks considering his/ her marks in different Specializations, the consideration for selection to the Selection List shall be affected as follows:

9.6.5.1 For IT Services Domain, the candidate shall be first considered for selection to the Selection List in a Specialization of Grouping 1, followed by a Specialization of Grouping 2, followed by a Specialization of Grouping 3. The candidate shall be allocated in whichever Specialization (s)he secures a place in the Selection List first in point of time and thereafter the selected candidate shall not be considered against remaining Specializations.

9.6.5.2 For Community & Victim Support and Counselling Services Domain, the candidate shall be considered for selection to the Selection List in the Specialization of Community Counselling first, and thereafter in Community & Victim Support Specialization. The candidate shall be allocated in whichever Specialization (s)he secures a place in the Selection List first in point



of time and thereafter the selected candidate shall not be considered against remaining Specializations.

9.6.5.3 For Forensic Sciences Domain, the candidate shall be considered for selection to the Selection List in a Specialization of Computer/ Digital Forensic Analysis first, and thereafter in Forensic Analysis Specialization. The candidate shall be allocated in whichever Specialization (s)he secures a place in the Selection List first in point of time and thereafter the selected candidate shall not be considered against remaining Specializations.

9.6.6 While preparing the Selection List, in the event of two candidates securing equal aggregate marks, the same Tie resolution criteria as in clause 9.5.2 hereinbefore shall be adopted.

10 MEDICAL

- 10.1 Before their enlistment in Punjab Police, the shortlisted candidates figuring in the Selection List shall have to be medically examined and certified physically fit for service by the Civil Surgeon/ Medical Board constituted by the Director General of Police, Punjab for this purpose.
- 10.2 The Medical shall be conducted as per the provisions of Punjab Police Rules (Appendix # 12.16, provided in PPR 12.16), the State Government Instructions and as per the criteria set by Punjab Police. The candidates shall be notified for the same via email and/ or SMS and/ or WhatsApp.
- 10.3 The candidates will be required to report for the Medical on their own, bearing the costs for the same and no reimbursement, whatsoever, shall be made in this regard.
- 10.4 The Substance Abuse Test shall be conducted as part of the Medical.



10.5 A certificate in the prescribed form signed by the Civil Surgeon personally, is an essential qualification for enrolment, as provided in PPR 12.16.

10.6 No relaxation, whatsoever, shall be granted in any of the parameters of Medical.

11 FINAL MERIT LIST

11.1 A Final Merit List shall be prepared after the Medical based on the Selection List prepared in clause 9.6 hereinbefore. For this purpose, the names of the candidates who are not declared fit for Service after the Medical shall be removed from the Selection List and those vacancies shall be left unfilled and carried forward to the next recruitment.

11.2 The selected candidates shall be issued the appointment letters specifying the date and place of joining.

11.3 The selected candidates shall be required to sign the Non-Disclosure Agreement (NDA) as well as agree to the terms and conditions of the employment with Punjab Police which will be given to them at the time of joining.

11.4 The selected candidates shall be required to give an undertaking, in writing, thereby consenting to be deployed for duty anywhere in State of Punjab, or outside the State anywhere in India.

11.5 No Waiting List shall be prepared and any unfilled vacancy shall be carried forward in the respective reservation category to the next recruitment. It is however clarified that the Domain(s)/ Specialization(s), if any, would be applicable as decided at the time of next recruitment afresh and may differ from the existing Domain(s)/ Specialization(s).



12 DECLARATION OF FINAL RESULT

After the approval of the Director General of Police, Punjab, the Final Merit List shall be released in the public domain on the recruitment portal, i.e. <https://iur.ls/punjabpolicerecruitment2021> and the official website of Punjab Police, i.e. www.punjabpolice.gov.in.

13 NO WAITING LIST

In the recruitment in TSS cadre, the reservation roster shall be applied to the vacancies of the single and unified cadre as a whole whereas the cut off of marks shall be applied to the individual Domain and Specialization/ Function on the basis of the number of candidates to be selected in that Domain and Specialization/ Function.

The selection of candidates to the individual Domain and Specialization/ Function is going to be reservation category agnostic. Therefore, no waiting list shall be prepared in the recruitment of Constables in TSS cadre.

14 DOCUMENT VERIFICATION

14.1 The documents of the enlisted candidates figuring in the Final Merit List shall be got verified from the University/ Authority/ Agency concerned.

14.2 The selection of the candidate shall be subject to the verification of his/ her documents in the Verification Process and if anything adverse is found against the candidate during the verification process, his/ her selection shall be summarily annulled and no claim, whatsoever, shall be entertained in this regard thereafter.

15 VERIFICATION OF CHARACTER AND ANTECEDENTS

15.1 The verification of character and antecedents of all the candidates who figure in the Final Merit List shall be undertaken as per the



Rules, Government instructions and Orders of Hon'ble Courts, if any, in this regard by following the prescribed procedures through the concerned authorities.

- 15.2 The selection of the candidate shall be subject to the verification of his/ her antecedents in the Verification Process and if anything adverse is found against the candidate during the verification process, his/ her candidature shall be summarily rejected and no claim, whatsoever, shall be entertained in this regard thereafter.
- 15.3 If it is ever revealed that a candidate has got appointment either by concealment of facts or by furnishing false or wrong information or by submitting fake or forged document/ certificate, (s)he shall be discharged from the service from the date of appointment, summarily i.e. without holding the regular disciplinary proceedings, treating him/ her ineligible for service and salary paid to him/ her may also be ordered to be recovered.

16 APPELLATE AUTHORITY

- 16.1 For matters pertaining to the grievance(s) related to the Test 1 and Test 2, the Selection List, the Final Merit List and the matters incidental thereto, the Director General of Police, Punjab, or any other officer of appropriate rank authorized by him/ her in this regard, shall be the Appellate Authority.
- 16.2 Any candidate having a grievance shall be required to make a representation in writing, addressed to the Appellate Authority, within 30 days of the declaration of the Final Result.
- 16.3 Any representation received after the expiry of 30 days shall not be entertained/ considered.



17 COMPLETION OF RECRUITMENT PROCESS

The recruitment process shall be deemed to have been completed on the expiry of 180 days from the date of declaration of the final result.

18 PROVISIONAL SELECTION

The selection in the recruitment process shall be purely provisional, and shall be subject to the following mandatory clearances:

18.1 Character and antecedent verification.

18.2 Verification of certificates for claiming reservation for Scheduled Castes/ Scheduled Tribes, Backward Classes, Wards of Freedom Fighters, Wards of Punjab Police Personnel and Economically Weaker Sections (EWS).

18.3 Verification of educational qualification certificates from the concerned Boards/ Universities.

18.4 In case of Ex-Servicemen, verification of the service record from the concerned department, unit or organization, as the case may be.

19 JOINING AND PERIOD OF PROBATION

19.1 Date and place of joining of selected candidates shall be communicated to them.

19.2 Biometric verification of selected candidates may be done at the time of joining the Service.

19.3 The selected candidates shall be put on Probation, which shall be of the duration as specified in Rule 7 of Punjab Police Technical and Support Services (PPTSS) Cadre Group-C Service Rules 2021 and the Punjab Government Instructions issued in this regard.

19.4 During the probation period, the selected candidates may be put through different fields of Policing in a rotational manner and the selected candidate has to perform duties at each place in a satisfactory manner.



19.5 As per Section 4(b) of Punjab Police Act, 2007, transfer of a member of one cadre to another cadre shall not be allowed.

20 APPLICATION PROCESS

20.1 APPLICATION FORM

20.1.1 The Application Form shall be available online on the website, details of which have been mentioned in this advertisement.

20.1.2 The period of Online Application Form shall be of 21 days.

20.1.3 There will be a common Application Form for Constables for all the Domains of Technical and Support Services Cadre.

20.1.4 The candidate(s) shall be required to apply in any one of the Domains as provided in para 5 this advertisement.

20.1.5 The candidate(s) shall be asked to fill in 3 choices for the preferred Recruitment Centre.

20.1.6 Punjab Police reserve the right to cancel any Recruitment Centre and ask the candidate(s) of that Recruitment Centre to appear from another Centre.

20.1.7 The candidate(s) will fill up the Application Form and submit the same online itself, after completing it in all respects.

20.1.8 The required documents, photographs and the signatures will also have to be uploaded by the candidate(s) in the online Application Form.

20.2 APPLICATION FEE

20.2.1 Application fees for opting for a minimum of one Specialization/ Function shall be charged as under:



S. No	Category	Application fees
1	General	Rs. 1500/-
2	SC/ ST/ BC	Rs. 800/-
3	EWS	Rs. 800/-
4	Ex-Servicemen/ Lineal Descendants	Rs. 700/-

20.2.2 The incremental Application fees to be charged for every additional Specialization/ Function shall be Rs. 600/- for all categories.

20.3 **MODE OF DEPOSIT OF FEE**

20.3.1 Application fees can be deposited online, alongwith the Application Form, via Net Banking, Debit/ Credit Card Payment or any UPI interface.

20.3.2 The Application Form fee once deposited shall not be refunded under any circumstances.

21 INSRUCTIONS TO CANDIDATES

21.1 Each candidate shall be issued an Admit Card indicating the specific date, time and venue for Recruitment Centre of candidate's Phase-I (Test 1 and Test 2).

21.2 The candidate is required to download the Admit Card and bring a hard copy (printout) of the same, alongwith a prescribed Photo Identity Proof (Aadhaar Card, Indian Driving License, PAN card, Voter Identity card, Indian Passport), for entry to the venue of the Test.

21.3 Applications must only be submitted in the online mode on <https://iur.ls/punjabpolicerecruitment2021>. Candidates would be



- first required to fill a Registration form followed by the Application Form, which in turn would be linked to the fee payment gateway.
- 21.4 Candidates desirous of applying for multiple Specializations/ Functions in a Domain shall be required to fill a single Registration form. However, they will have to deposit additional Application Fees separately for each Specializations/ Functions.
- 21.5 Candidates are advised to read the instructions, as given in the Recruitment Portal, carefully, before filling-up the Application form. Incomplete Application shall be rejected outright and no correspondence shall be entertained in this regard.
- 21.6 Candidates are advised to fill all details, including their correct and active email address and mobile number, in the online Application.
- 21.7 Candidates must ensure that they have access to good internet facility with reasonable speed and facility to ensure proper completion of application process including online payment of fee.
- 21.8 Before starting to fill-up the online Application Form, candidates must keep the following information/ documents ready (including scanned copies of documents to be uploaded) with them as they would be required to upload the requisite documents, as applicable, in the online Application Form:
- Personal details
 - Valid and active email ID
 - Valid and active mobile number for receiving SMSs
 - Any two ID proofs (Aadhaar Card, Passport, Voter I-Card, Driving License, PAN Card)
 - Matriculation Certificate for proof of age
 - Details/ certificates pertaining to requisite educational qualifications including that for Punjabi language
 - Certificates issued by the Competent Authority for claiming benefit of reservation, including Sports category, if applicable.



- Online payment Facility such as internet banking, debit/ credit card, UPI, etc.
 - Recent passport size photo against white background (not older than 3 months) scanned with maximum 50-200 KB size in JPEG format. The photograph should be as per the guidelines given in the website www.passportindia.gov.in.
 - Scanned signatures (maximum 50-200 KB in JPEG format)
- 21.9 Candidates should fill all details, including the category, correctly in online application form and submit the same only after ensuring that all the particulars/ details are correctly reflected in it. No request for any change in the online Application Form, after it is submitted, shall be entertained.
- 21.10 Every Candidate is required to declare her/ his Home district while filling up the Application Form.
- 21.11 Candidates are advised to retain printed/ hardcopies of their online Application Form and produce the same as and when required.
- 21.12 All candidates who apply for advertised posts shall be considered 'provisionally eligible' for appearing in the recruitment test. Acceptance of applications at this stage and allotment of Roll Numbers would not indicate acceptance of candidature, since there is no scrutiny of documents before the recruitment process actually begins.
- 21.13 The scrutiny of Application Forms shall be done after the conduct of the examination. The candidature of such candidates who are found not meeting the eligibility criteria, shall be rejected during or after the scrutiny process.
- 21.14 Any attempt on the part of a candidate to obtain support for his/ her candidature by any unfair means will render him/ her liable for disqualification and/ or legal action.



- 21.15 Candidates already employed with the government applying for this recruitment, will be required to get a No Objection Certificate (NOC) from the Head of Department/ Office concerned. If however, the NOC is not available at the time of filling up of the Application Form, the candidate shall have to give a declaration to the effect that (s)he shall produce the same in original at the time of Document Scrutiny.
- 21.16 Candidates are advised in their own interest, to submit online applications well before the closing date and not to wait till the last date to avoid any rush/ server load on the website on the last days. Punjab Police shall not be responsible for the candidates not being able to submit their applications within the last date on account of the aforesaid reasons or for any other reason beyond the control of Punjab Police.
- 21.17 In case a candidate submits more than one Application Form for the same post, only the latest Application Form submitted by the candidate shall be considered. The Fees deposited for the earlier Application Form(s), if any, shall be forfeited.
- 21.18 In case the candidate experiences any difficulty in downloading the Admit card, then (s)he may contact the Helpdesk for assistance. Unique Registration ID may be kept handy while contacting the Helpdesk.
- 21.19 While filling the Application Form, the candidates shall be required to give an undertaking regarding the genuineness of their candidature and correctness of the information provided by them in the Application Form. Submission of wrong information by candidate may invite legal action.
- 21.20 Application Form will be liable to be rejected:
- 21.20.1 If the Application Form is incomplete;



- 21.20.2 If it has been found to have been submitted without the requisite Application fees;
 - 21.20.3 If found without the supporting documents, and/or photograph and/or signatures;
 - 21.20.4 If it is found to be without the mandatory declarations.
- 21.21 The Online Application Form has been designed in English and Punjabi for the convenience of the candidates. However, if there is any variation in the interpretation of the words/ instructions in both English and Punjabi, the English version shall prevail and the decision of Chairperson of the Central Recruitment Board shall be final.
- 21.22 Last date and time for submission of online applications is 23:59:59 on 29th September, 2021.

22 CREATION OF HELP-DESK/ CALL CENTRE

- 22.1 A dedicated Helpdesk shall start functioning on toll free number 18002102565 from 9 am on 9th September, 2021 and shall function from 9 AM to 6 PM everyday till 30 days after the declaration of Final Result.
- 22.2 The Helpdesk will guide and help the applicants in filling up the online Application Form and also give satisfactory replies/ clarifications to their queries.
- 22.3 A list of FAQs (Frequently Asked Questions) has also been published on the recruitment website alongwith their answers.
- 22.4 Candidate(s) who have any doubts about their candidature or have not received their roll numbers till the prescribed date (to be specified in the advertisement) can contact the Helpdesk for answer to their queries.



23 ALERTS TO CANDIDATES

- 23.1 It shall be the responsibility of the candidates to keep themselves abreast of the updates with respect to the process and stage of the selection process by frequently checking the recruitment portal for updates.
- 23.2 No individual communication shall be made with the candidates. However, candidates shall be informed at various stages of the selection process via email and/ or SMS and/ or WhatsApp.
- 23.3 The alerts are just an additional facilitation provided to the candidates. The department shall not be responsible for non-receipt of an alert due to any reason whatsoever.
- 23.4 The candidates are advised to disable 'Do Not Disturb' (DND) service on their mobile phones to enable timely receipt of SMS alerts.

SD/-

(Dinkar Gupta, IPS)
Director General of Police,
Punjab.



Syllabus for Domain and Specialization/ Function (Constables)

1. Cyber Security

Cyber Security
<ul style="list-style-type: none">• Fundamentals of Cyber Security<ul style="list-style-type: none">○ Cybersecurity Concepts and Security in Evolving Technologies○ Information and network security○ Cyber Attacks○ Cyber Laws and Forensics including IT Act, Personal Data Protection Bill 2019 and Cert-In Rules 2013
<ul style="list-style-type: none">• Security Architecture<ul style="list-style-type: none">○ Identity and Access Management○ Understanding Security Operation○ Incident Response Process○ Contingency planning in the event of cyber attack○ Logging, Monitoring and Auditing○ Security Event generation and Collection
<ul style="list-style-type: none">• Network and Communications Security<ul style="list-style-type: none">○ Principles and Components of Network Security○ Types of Attack○ Fundamentals of Connections, Requests, Ports and Packets○ Design and Configuration of Firewalls○ VPN Configuration○ IDS Configuration○ Concept of Keys and Encryption Techniques○ Kerberos and Hashing Techniques○ Symmetric Key Cryptography and Algorithms (DES and AES)○ Public Key Cryptography (RSA) and Message Authentication○ Digital Signatures○ IPSec Protocols
<ul style="list-style-type: none">• Web Application Security<ul style="list-style-type: none">○ Web application Security Fundamentals○ Web Application Vulnerabilities○ OWASP Top 10 Vulnerability○ Web Application Mitigations



Cyber Security

- **Ethical Hacking and VAPT**

- Ethical Hacking
- Vulnerability Assessment
- Penetration Testing

- **Cyber Forensics and Investigation**

- Fundamentals of Cyber Forensics and Investigation, Acquiring Evidence
- Investigation
- Windows and Linux Artifacts Analysis and Document Forensics
- Email Forensics and Mobile Forensics – Investigation Techniques
- Fundamentals of Security in Android, Vulnerabilities in Public Exploits
- Laws

- **Malware Analysis**

- Fundamentals of Malware Analysis
- Advanced Static and Dynamic Analysis



2. Geographical Information System (GIS)

Geographical Information System (GIS)	
•	Fundamentals of GIS theory
•	Understanding of spatial analysis
•	Understanding of map design
•	GIS Data <ul style="list-style-type: none">○ Data collection, storage, and editing○ GIS Vector Data Model, Topology, Shapefiles○ GIS Raster Data Model, Raster Analysis
•	GeoCoding <ul style="list-style-type: none">○ Address Geocoding○ Building a Geodatabase○ Reverse GeoCoding
•	Maps <ul style="list-style-type: none">○ Creating and using maps○ Analyzing mapped information○ Sharing and discovering geographic information
•	Python Skills <ul style="list-style-type: none">○ Handling different types of variables including number, string, Boolean○ Handling different Data Types including List, Tuple, Set, Dictionary○ Handling of Loop○ Expertise in Pandas Dataframes○ Reading and writing of CSV files○ ETL (Extract/Transform/Load)○ Data Cleansing
•	SQL Query & Update <ul style="list-style-type: none">○ Basics of SQL syntax○ Aggregate functions with GROUP BY commands○ Select/Insert/Update SQL Commands○ SQL Nested Queries○ Use of Indexes to improve Query Performance



3. Data Mining

Data Mining

- **SQL Query**
 - Basics of SQL syntax
 - Aggregate functions with GROUP BY commands
 - Advanced queries with string operations and comparison operations
 - SQL JOIN commands
 - SQL Nested Queries
 - Use of Indexes to improve Query Performance
- **Python Skills**
 - Handling different types of variables including number, string, Boolean
 - Handling different Data Types including List, Tuple, Set, Dictionary
 - Handling of Loop
 - Expertise in Pandas Dataframes
 - Reading and writing of CSV files
 - ETL (Extract/Transform/Load)
 - Data Cleansing



4. Network Management

Network Management

- **Network basics**
 - Network architectures (OSI Model)
 - Fundamentals of Hubs, switches & routers
 - Routing, VLANs and ACLs
 - IP addresses & IP subnetting
 - Cabling and Network topologies
- **DNS**
 - Installation and configuration of DNS
 - Installation and Configuration of Active Directory
 - Setup of Domains, Domain Users & Domain Security
 - Local and Domain Security Policy
 - Installation and Configuration of DHCP
- **VPN**
 - Configuration and Implementation of VPN
 - Setup and Configuration of IPsec VPN
 - Configuration and Implementation of Remote Access Services
- **Firewalls**
 - Installation and Configuration of Firewalls
 - Installation and Configuration of SSL Certificates
- **Routing and VLANs**
 - Installation and Configuration of VLANs
 - Configuration of Routing Tables
 - Network Traffic Management via Ports, Protocols, Source and Destination IPs
 - Configuration of Network Address Translation (NAT) to allow Internet Access



5. Data Analytics

Data Analytics
<ul style="list-style-type: none">• Data Modeling<ul style="list-style-type: none">○ Design schema in data modelling○ Normalization & Denormalization○ Primary Key & Foreign Key○ Hashing○ Hierarchical v/s Relational Database
<ul style="list-style-type: none">• SQL Query<ul style="list-style-type: none">○ Basics of SQL syntax○ Aggregate functions with GROUP BY commands○ Advanced queries with string operations and comparison operations○ SQL JOIN commands○ SQL Nested Queries○ Use of Indexes to improve Query Performance
<ul style="list-style-type: none">• Excel Skills<ul style="list-style-type: none">○ Pivot Tables○ Charts & Visualization○ Functions used in Analytics - vlookup, sort, Date, string, Aggregate
<ul style="list-style-type: none">• Python Skills<ul style="list-style-type: none">○ Handling different types of variables including number, string, Boolean○ Handling different Data Types including List, Tuple, Set, Dictionary○ Handling of Loop○ Basic of Pandas Dataframes○ Reading and writing of CSV files
<ul style="list-style-type: none">• MIS & Business Intelligence<ul style="list-style-type: none">○ Basics of ETL (Extract/Transform/Load)○ MIS Database Design Considerations○ Building Reports and dashboards



6. Wireless & Telecommunications

Wireless & Telecommunications
• Introduction of IP Phones and digital EPABX Connectivity.
• High Tech Digital Exchange.
• Digital Technology with advance features of digital wireless communication.
• Knowledge about Satellite Communication.
• Knowledge about Repeater Station for strengthening and improving the range of communication.
• Knowledge about Mobile HF Communication using half loop antenna.
• Knowledge about half Loop Antenna technique for HF mobile Communication i.e. NVIS (Near Vertical Incident Signal).
• Knowledge about Encryption/Decryption for transmission/ receiving in digital communication.
• Knowledge about operation of modern Digital testing/measuring instruments for newly launched Digital wireless equipments.
• Optical Fiber Communication.
• Maintenance of IT equipments as well as wireless equipment having Digital Technology.
• Knowledge about trunking technologies like TETRA, APCO
• Knowledge of various features of Digital Mobile Radios
• Knowledge of installation and surveillance of CCTV camera setup.
• Knowledge of handling of portable VSAT terminal like Flyaway satellite terminal for emergency purpose.
• Knowledge of Software defined Radios
• Knowledge of Internet of Things and Artificial Intelligence



7. Website Administration

Website Administration

- **Manage Website Infrastructure**
 - Fundamentals of DNS (Domain Name System)
 - Installation and Configuration of Software and Hardware Load Balancer
 - Installation and configuration of reverse proxy server
 - Installation and Configuration of IIS and Apache Web Server
 - Starting and Shutting down of Web Server
 - Configuring and Troubleshooting Web Server
 - Configure access for users
 - Seamlessly connect to databases and other back-end components
- **Website Security**
 - Manage Security of Web Sites
 - Installation and configuration of SSL certificates
 - Installation and configuration of Web Application Firewalls
 - Knowledge of DDOS attacks
 - Knowledge of OWASP (Open Web Application Security Project)
 - Knowledge of VAPT (Vulnerability Assessment and Penetration Testing)
- **Monitor Performance and Redundancy**
 - Monitor website performance
 - Assess user feedback and Web Site usage
 - Provide Technical Support to users
 - Take Backup of Web Sites
 - Upgrade Web Applications with zero downtime
 - Examine Access and Error Logs
- **Create and Update Web Pages**
 - Maintain and Troubleshoot websites
 - Create simple web pages based on wireframes



8. Computer/ Digital Forensic Analysis

Computer/ Digital Forensic Analysis	
<ul style="list-style-type: none">● Digital Forensic Tools<ul style="list-style-type: none">○ Knowledge of Different Digital Forensic Tools including Cellebrite UFED 4PC, Cellebrite Pathfinder, Oxygen Forensic Detective, MSAB XRY, EnCase Forensic Software, AccessData Forensic Toolkit, Magnet AXIOM, Paraben E3 Universal, Cellebrite UFED Cloud Analyzer, Magnet AXIOM Cloud, AD Triage, Logicube Forensic Falcon Neo, Talon Ultimate, Tableau TD2u, FTK Imager	
<ul style="list-style-type: none">● Digital Forensics<ul style="list-style-type: none">○ Fundamentals of Computer Forensics○ Understanding of Digital Forensics and Forensic Report○ Data Acquisition of physical storage devices, Information hiding, registry & password recovery, Email & database forensics, Memory acquisition.○ Knowledge of Forensic Investigations, Investigations Needs, Legal Process, and Computer Forensics Resources	
<ul style="list-style-type: none">● Computer Forensics Tools<ul style="list-style-type: none">○ Evaluating Computer Forensics Tool Needs, Types of Computer Forensics Tools,○ Tasks Performed by Computer Forensics Tools, Tools Comparisons,○ Computer Forensics Hardware and Software Tools,○ Command-Line Forensics Tools, UNIX/ Linux Forensics Tools,○ Forensic Workstations○ Mobile phone Forensics: Mobile Phone data acquisition through logical, physical and file system techniques, forensic procedures, accessing files present in SIM card, device data and memory card. Procedures for imaging mobile USB mass storage devices.	
<ul style="list-style-type: none">● Windows Systems and Artifacts<ul style="list-style-type: none">○ Windows File Systems, File Allocation Table, New Technology File System,○ Useable File Formats,○ Unusable File Formats, Converting Files, Registry, Event Logs, Prefetch Files, Shortcut Files, Windows Executables etc.	



Computer/ Digital Forensic Analysis

- **Fundamentals of Network Security and Associated Techniques**
 - Command Line scripting
 - Firewall Design Principles, VPNs, Worms, Viruses, Security of Network Layer, Security of Application Layer Protocols, Different Forms of Vulnerabilities, Investigating Network Intrusions and Web Attacks, Router Forensics etc.



9. System Administration

System Administration

- **Installation Operating System (Windows and Linux)**
 - Configuration of Operating System
 - Assigning Hostnames for the machines
 - Assigning IP addresses
- **Virtualization**
 - Creation of Virtual Machines (VMWare)
 - Startup and shutdown of Virtual machines
 - Configuration of Virtual Machine resources
 - Backup and Restore of Virtual Machine
- **File Systems & Storage**
 - File Systems and types of File systems
 - Configuration of Storage, Disk Partitions, Disk Volumes
 - Understanding of NFS server and NFS clients
 - Assigning folder permissions
 - Backup and Restore
 - Understanding RAID LEVELS
 - Configuring different types of RAID LEVELS (0,1 and 5)
 - Creating and mounting file system
 - File security & Permissions
- **Print Services**
 - print spooling
 - Concepts and Operation
 - Configuration and Cross-Platform Issues
- **FTP & Telnet**
 - Configuring FTP server and FTP clients
 - Configuring FTP user access, FTP security
- **Monitoring System Performance**
 - Monitor and manage running processes
 - Identify programs and processes consuming high CPU, memory, IO
 - Kill processes
 - Configuring Swap space
 - Getting system information
 - Remotely manage systems with SSH and RDP



System Administration

- **Shell programming**
 - Knowledge of Common Command Line Interface Commands (Windows and Linux)
 - Basics of Shell Programming
- **Managing user & Groups**
 - Adding users, Groups
 - Deleting Users, Groups
 - Changing permissions and ownerships
- **DHCP**
 - Fundamentals of DHCP
 - Installation and Configuration of DHCP
 - Configuring DHCP server for different DHCP client
- **Web Server**
 - Installation and Configuration of IIS and Apache Web Server
 - Starting and Shutting down of Web Server
 - Configuring and Troubleshooting Web Server



10. Programming/ Coding

Programming/ Coding

- **Fundamentals of Object-Oriented Programming & Systems**
 - Object & Constructors
 - Inheritance
 - Polymorphism (Over Loading & Over Riding)
 - Abstraction & Interface
 - Encapsulation
- **Variable Manipulation**
 - Byte, Short, Integer, Long, Float, Double, Character
 - String Buffer
 - Single Dimensional Array
 - Multi-Dimensional Array
 - Exception Handling
 - Try-Catch-Finally
- **Multithreading**
 - Thread Creations
 - Thread Life Cycle
 - Life Cycle Methods
 - Synchronization
- **SWING (JFC)**
 - Introduction Diff B/W AWT and SWING
 - Components hierarchy
 - Panes
 - Individual Swings components J Label
 - JButton, JTextField, JTextAres
- **J2EE Containers**
 - Web Services Support
 - Web Server (Tomcat) and Application Server (JBOSS)
 - Overview, installation and Configuration
- **SQL**
 - Basics of SQL queries
 - SQL Joins
 - JDBC
 - Types of Drivers
 - Prepared Statement



Programming/ Coding

- **Http Session**
 - Cookies
 - URL-Rewriting
 - Hidden-Form Fields
 - Filters & Wrappers
 - Listeners
 - Web-Security
- **Basics of Spring Boot and Android Programing**



11. Database Administration

Database Administration

- **Installation and Startup Configuration**
 - Installing and configuration of RDBMS (MySQL and PostgreSQL)
 - Creation of Database, Tables, Indexes
 - Configure Partitioning
 - Database Configuration Parameters - Storage Size, Memory, Number of concurrent connections
 - Start and stop Database
 - Understand the stages of database startup
 - Configure Redo Log File
- **Monitoring Database**
 - Identify Poorly performing SQLs
 - Monitor Memory, Disk, Network, CPU usage
 - Monitor Alerts
 - Proactive Tablespace Monitoring
 - Monitoring Table Locks
 - Monitoring table and index space usage
- **Database Backup and Recovery**
 - Create consistent Full database backups
 - Create incremental backups
 - Automate database backups
 - Performing Database Recovery (full and partial)
 - Apply Redo Log files
- **Database Security**
 - Describe DBA responsibilities for security
 - Apply the principal of least privilege
 - Enable standard database auditing
 - Review audit information
 - Maintain the audit trail



Database Administration

- **Administering User Security**
 - Create and manage database user accounts
 - Authenticate users
 - Assign default storage areas (tablespaces)
 - Grant and revoke privileges
 - Create and manage roles
 - Create and manage profiles
 - Implement standard password security features
 - Control resource usage by users
- **High Availability**
 - Configure Database for High Availability
 - Setup Data Replication
 - Configure Continuous Data Replication



12. IT Support

IT Support

- **Software**

- Basic Computer/ Data communication Terminology.
- Computer Abbreviation.
- Basics of OS, Unix/ Linux and Shell Programming.
- Programming and Database management System (C/ C++/ Java, Object Oriented Programming, Data Structures through C++, .NET Technology, SQL Server, Oracle.
- Web Designing (HTML, DHTML, Java Script, Flash, Photoshop)
- Number System, Hexadecimal number system
- Network Technologies and Internet (IP Addresses, Switches, TCP/ IP, VPN, Firewall, Cryptography and System Security, Cyber Crimes)
- Microsoft Office/ Open office (Word, Excel, power point, Access, Outlook)
- Cloud Computing (Cloud computing concepts, Cloud deployment scenarios, Security in cloud computing)
- Software Testing and Quality Management (Software testing, Testing techniques, Testing Process and Specialized Systems Testing)

- **Hardware**

- Basic Electricity and conducting material: Current, Voltage, emf, Power generation system, Switch-plug wiring, Analyzing Conductivity of elements, Types of Conductors, Semi-Conductors-Silicon, Germanium.
- Integrated Circuits and Logic Gates (AND, OR, XOR, NOT, NAND, NOR and XNOR)
- Maintenance and Troubleshooting of Operating Systems
- User Accounts, Windows utilities, Data backup, Protect Data from viruses, Installing, managing and troubleshooting Hardware devices and drivers, Antivirus, familiarization with DDS, CLI & Linux OS
- Mother Board in detail: Nomenclature, technology, standards, AMD CPUs, Cyrix CPUs. CPU over clocking, Troubleshooting, CPU problems. Chip Sets: AMD chip sets, Intel chip sets, VIA chip sets SIS. Chip sets, OPTI chipsets, Legacy and support ICS.
- PC-assembly and CMOS setup and troubleshooting: Observation of all parts of HDD, CD/DVD, and SMPS, Identification of cables and computers. Mounting Motherboard in cabinet Installation of cards, device and then connecting cables. Fitting of cabinet. CMOS-Setup Troubleshooting.
- Basics of Printers: Types of Printers, mechanism, how printer works, Inkjet printer, working of Laser printer, Fonts/ Type-faces, Troubleshooting printers.
- Regulated Power Supply: Basic regulated power supply using Zener Diode,



IT Support

Basic Switch Mode Power Supply (SMPS), Basic Uninterrupted Power Supply (UPS)



13. Cyber Crime

Cyber Crime
<ul style="list-style-type: none">• Fundamentals of Cyber crime<ul style="list-style-type: none">○ Cyber Crime Concepts and Security in Evolving Technologies○ Basics of Internet, IP, Network, Firewall, Router, MODEM, devices using Internet○ Cyber Laws including IT Act, Personal Data Protection Bill 2019 and Cert-In rules 2013
<ul style="list-style-type: none">• Knowledge of Common Cyber Crimes<ul style="list-style-type: none">○ Understanding of cyber-attacks and frauds committed through email○ Detection of email header, spoofing, etc.○ Knowledge of Social Engineering including phishing, Baiting, etc.○ Knowledge of Social Media, social media account hacking/spoofing, obscenity, identity theft, etc.○ Knowledge of Source code and Business Data theft
<ul style="list-style-type: none">• Cyber Forensics and Investigation<ul style="list-style-type: none">○ Fundamentals of Cyber Forensics and Investigation, Acquiring and presenting Evidence○ Windows and Linux Artifacts Analysis and Document Forensics○ Email Forensics and Mobile Forensics – Investigation Techniques○ Fundamentals of Security in Android, iOS, Windows and Linux and vulnerabilities○ Data recovery from Android, iOS, Windows and Linux machine○ Image creation of storage devices for data recovery
<ul style="list-style-type: none">• Virus and Malware Analysis<ul style="list-style-type: none">○ Fundamentals of Virus and Malware Analysis○ Knowledge of trojans and ransomware○ Advanced Static and Dynamic Analysis
<ul style="list-style-type: none">• Logical and Deductive Reasoning<ul style="list-style-type: none">○ Ability to understand transfer of money between accounts○ Ability to co-relate phone calls/emails (time of call, frequency, etc.) with phishing attempts○ Ability to co-relate information flow between email and SMS (OTP, etc.)



14. OSINT Analysis

OSINT Analysis

- **OSINT as an Intelligence Collections platform**
 - What Is Open Source Intelligence?
 - How it is used?
 - Nature and functions of OSINT
 - OSINT objectives
 - Strengths and weaknesses of OSINT
- **OSINT techniques as an intelligence gathering discipline, the role that OSINT plays in the intelligence process**
 - Types of Open-Source Intelligence Techniques by using following information:
 - Search Engines
 - Social Networks: Facebook
 - Social Networks: Twitter
 - Social Networks: Instagram
 - Social Networks: General
 - Online Communities
 - Email Addresses
 - Usernames
 - People Search Engines
 - Telephone Numbers
 - Online Maps
 - Documents
 - Images
 - Videos
 - Domain Names
 - IP Addresses
 - Government & Business Records
 - Advanced Linux Tools
 - Data Breaches & Leaks
 - What Is Threat Intelligence? Definition and Examples



OSINT Analysis

- **How the internet works. URL analysis, IP addressing, DNS services, and other internet related protocols.**
 - Different types of Internet Connections
 - Sandboxing
 - URL IP Lookup
 - Types of IP Addresses
 - Subnetting
 - DNS Spoofing
 - Reconnaissance tools
- **Introduction to search engines and the composition of basic but effective search queries.**
 - Types of Search engines (Crawlers, Directories, Hybrid, Meta, Specialty Search engines)
 - Dorking
 - SSL certificates
- **Software tools and online services usable for gathering, processing, and analysis of raw data.**
 - Types of Data
 - News analytics
 - Opinion Mining
 - Scraping
 - Sentiment Analyses
 - Text Analytics
- **Identifying the registrant(s) of internet domain names and determining the physical location of websites.**
 - Whois tools
 - Reverse IP Lookup
 - IP addresses, mapping domain names to IP addresses and vice versa.
 - Using search engine caches and other historical archives of website content.
 - Harvesting web data



OSINT Analysis

- **Geopolitical implications that must be considered when deciding to collect and act on intelligence**
 - Domain of internal security and safety
 - Economically, ethnically, religiously and ideologically induced factors
 - MLAT and Letter Rogatory
 - staying anonymous on the internet
 - Use of proxy servers and Web-based anonymizing tools.
 - VPN
- **Image and photo tracking, tracing, and analysis.**
 - Extracting and analyzing meta data from image-, document, audio, and video files.
 - Analyzing meta data in images, documents etc. and determining the authenticity of acquired data through hash calculations
- **Crypto currency transactions and block chain analysis**
 - Crypto Wallets
 - Determining historic ownership of Bit Coins
 - Analyzing Bitcoin Blocks



15. Community & Victim Support

Community & Victim Support
• Introduction and Approaches to Psychology
• Methods of Psychology
• Personality: Biological and Socio-Cultural Factors, Theories and Assessment of Personality
• Intelligence: Genetic and Environmental influences; Types of Intelligence Tests
• Biological Foundations of Behavior
• Experimental Psychology and Memory
• Emotions and Introduction to Emotion Intelligence
• Theories of Motivation
• Development: Heredity, Environmental Influences and Theories of Development
• Determinants of Attention, Selective Attention and Span of Attention
• Perception Laws and Determinants
• Research Methods in Social Psychology
• Social Perception and Cognition
• Prosocial Behavior and Bystander Effect
• Applications of Social Psychology
• Abnormal Psychology Models: Psychodynamic, Cognitive-Behavioral and Humanistic
• Criteria of Abnormality, Classification System: DSM
• Perspectives on Abnormal Behavior and Mental Health Disorders (Mood and Behavioral Disorders)
• Drug Abuse: Causes and Types, Alcohol, Opium, Amphetamines
• Psychotherapies: Psychodynamic, Behavioral, Cognitive-Behavioral, Humanistic
• Recent Perspectives of Psychology



Community & Victim Support

- Stress and Stress Management
- Sociology: Social Structure, Society, Community and Norms
- Application and Relationship of Social Psychology with Sociology
- Marriage and Family in India: Types and changing patterns
- Gender discrimination; Changing Sex Ratio: Causes and consequences
- Domestic Violence: Forms & Legislation. Violence against Children
- Under-privileged Sections (Women, Physically Disabled)
- Drug abuse & Alcoholism, Suicide and Farmer's Suicide
- Techniques of Data Collection and Analysis of Data
- Juvenile Delinquency
- Disorganization and Emerging Problems
- Goals and Principles of Social Work
- Role of Socialization in Personality Development
- Family and Child Welfare: Concepts and Principles
- Functions of Major Institutions: Family, Marriage, Caste
- Aging and Drug De-Addictions Problems and Role of Social Worker
- Social Case Work: Principles, Process and Techniques
- Contemporary Indian Social Problems: Casteism and Communalism, Violence, Drug Abuse and Alcoholism, Child Marriage and Widow Remarriage
- Social Work Research
- Values and Code of Ethics in Social Work
- Role of Medical Social Worker



16. Community Counselling

Community Counselling
<ul style="list-style-type: none">• Foundations of Psychology<ul style="list-style-type: none">○ Perception, Learning and Motivation, Personality and Self, Intelligence
<ul style="list-style-type: none">• Development of Human Behaviour:<ul style="list-style-type: none">○ Growth and development; Principles of development, Role of genetic and environmental factors in determining human behaviour; Influence of cultural factors in socialization; Life span development - Characteristics, development tasks, promoting psychological well-being across major stages of the life span.
<ul style="list-style-type: none">• Social Psychology<ul style="list-style-type: none">○ Introduction to Social Psychology, Social Cognition, Perception and Attitudes, Aspects of Social Interaction and Influence, Group Dynamics and Intergroup Relations
<ul style="list-style-type: none">• Psychology of Health and Well-Being<ul style="list-style-type: none">○ Introduction to Health Psychology, Well-Being, Managing stress, illness and pain, Health-enhancing behaviors
<ul style="list-style-type: none">• Industrial and Organizational Psychology<ul style="list-style-type: none">○ Introduction and issues in industrial/organizational psychology, Introduction to work-related attitudes and work motivation, Leadership, Positive Organizational Behavior
<ul style="list-style-type: none">• Development of Human Behaviour:<ul style="list-style-type: none">○ Growth and development; Principles of development, Role of genetic and environmental factors in determining human behaviour; Influence of cultural factors in socialization; Life span development - Characteristics, development tasks, promoting psychological well-being across major stages of the life span.
<ul style="list-style-type: none">• Learning:<ul style="list-style-type: none">○ Concept and theories of learning (Behaviourists, Gestaltalist and Information processing models); The Processes of extinction, discrimination and generalization; Programmed learning, probability learning, self-instructional learning, concepts; Types and the schedules of reinforcement, escape, avoidance and punishment, modeling and social learning.



Community Counselling

- **Motivation and Emotion:**
 - Psychological and physiological basis of motivation and emotion; Measurement of motivation and emotion; Effects of motivation and emotion on behaviour; Extrinsic and intrinsic motivation; Factors influencing intrinsic motivation; Emotional competence and the related issues.
- **Intelligence and Aptitude:**
 - Concept of intelligence and aptitude, Nature and theories of intelligence - Spearman, Thurstone, Gullford Vernon, Sternberg and J.P; Das; Emotional Intelligence, Social intelligence, measurement of intelligence and aptitudes, concept of IQ, deviation IQ, constancy of IQ; Measurement of multiple intelligence; Fluid intelligence and crystallized intelligence
- **Attitudes, Values and Interests:**
 - Definition of attitudes, values and interests; Components of attitudes; Formation and maintenance of attitudes; Measurement of attitudes, values and interests; Theories of attitude change; Strategies for fostering values; Formation of stereotypes and prejudices; Changing others behaviour; Theories of attribution; Recent trends
- **Issues and Perspectives in Modern Contemporary Psychology:**
 - Computer application in the psychological laboratory and psychological testing; Artificial intelligence; Psychocybernetics; Study of consciousness - sleep - wake schedules; dreams, stimulus deprivation, meditation, hypnotic/drug induced states; Extrasensory perception; Intersensory perception Simulation studies
- **Psychological well being and Mental Disorders:**
 - Concept of health-ill health; Positive health, well being; Causal factors in mental disorders (Anxiety disorders, mood disorders, schizophrenia and delusional disorders; personality disorders, substance abuse disorders); Factors influencing positive health, well being, life style and quality of life; Happiness disposition
- **Therapeutic Approaches: Psychodynamic therapies**
 - Behaviour therapies; Client centered therapy; Cognitive therapies; Indigenous therapies (Yoga, Meditation); Bio-feedback therapy; Prevention and rehabilitation of the mentally ill; Fostering mental health



Community Counselling

- **Rehabilitation Psychology:**
 - Primary, secondary and tertiary prevention programmes - role of psychologists; Organizing of services for rehabilitation of physically, mentally and social ly challenged persons including old persons, Rehabilitation of persons suffering from substance abuse, juvenile delinquency, criminal behaviour; Rehabilitation of victims of violence, Rehabilitation of HIV/AIDS victims, the role of social agencies.



17. Forensic Analysis

Forensic Analysis

- **Fundamentals of Forensic Science**
 - Law of individuality, principle of Exchange, Law of Probability, Principle of Comparison, Principle of Analysis, Presentation of expert evidence in the court of Law and basic understanding of different tools and techniques involved in forensic sciences.
 - Definition, Nature, Need, Functions, Development of forensic science.
 - Examination, Evaluation, Scientific and modern aids at the scene of crime.
 - Presentation of evidence and evidentiary clue, expert's presentation, presenting counsel's contributions, defense counsel's role, Court's participation.
 - Introduction to the Study of Human Osteology and its applications in Forensic Sciences. Gross Morphology of Human Skull, Girdle Bones, Long Bones, Vertebral Column and rib cage.
 - Determination of Age, Sex and Stature from Human Skeletal material
 - Demonstration of and interpretation of different types of mechanical injuries.
 - Forensic Science Laboratories- Organization Setup; Divisions and their Utilization
 - Regional Labs
 - Central and State Forensic Science Laboratories in India.
- **Crime Scene Management:**
 - Crime Scene Search,
 - Crime Scene Recording
 - Crime Scene Reconstruction.
- **Physical Evidences:**
 - Definition and Importance of Physical Evidence
 - Search and collection
 - Lifting, Handling and packing, Forwarding to Laboratory for Analysis
 - Interpretation Including Substantiating and Presentation of Document in Court
 - Handwriting and Questioned Documents; Questioned documents, Handwriting and its development, anonymous letters, alterations, disguised handwriting, collection of specimens, individual characteristics.



Forensic Analysis

- **Forensic Physics:**
 - Glass Fracture Studies,
 - Footprints, Tyre Impression etc.,
 - Tool Marks,
 - Examination of Spurious Articles Referred in Infringement of Trade Mark Act
 - Examination of Physical Evidence in Road Accidents/ Traffic Accidents.
- **Forensic Ballistics:**
 - Role and Importance in Investigation,
 - Classification of Firearms and Range of Firing,
 - Collection, Handling, Preservation of Firearms and Ammunitions,
 - Type of Firearm,
 - Evidence, Kind of Information to be Elicited from the Forensic Expert
 - Understanding and Interpreting the Forensic Reports on Ballistic Examination.
- **Forensic Serology and Forensic Biology:**
 - Forensic Serology: Different Types of Physiological Fluids Encounter in Crime Location
 - Hematological markers & Detection of Blood stains and other body fluids
 - Handling & Collection – Do's and Don'ts,
 - Blood Spatter Pattern Analysis,
 - Interpretation of Reports
 - Forensic Biology: Significance of Biological Evidences: Hair, Fibre, Diatoms & Plant Materials etc.
- **DNA Fingerprinting:**
 - DNA FP – Introduction & its Significance in Forensic Science,
 - Types of Cases,
 - Guidelines in Handling of Evidences
 - Interpretation of Reports.
- **Forensic Chemistry:**
 - Investigation of fires, seat, time, natural cause, suspected arson, motive search for evidence, & its collection and evaluation
 - Definition, type, uses, improvised explosive devices, Post Blast investigation, collection of evidence and its evaluation
 - Collection- Precautions, Sampling Procedures



Forensic Analysis

- **Biometrics and its Application in Investigation:**
 - Fingerprints
 - Footprints
 - Facial recognition system
 - Automated Fingerprint Identification System
 - Specimen Fingerprint and Fingerprint Bureau
- **Advances in Forensic Science:**
 - Forensic Engineering,
 - Audio – Voice Analysis,
 - Forensic Nursing
 - Railway Forensics.
- **Field Level Forensic Tools:**
 - Application of Alternate Light Sources
 - Kits for Detection of NDPS and Explosives
 - Detection of Body Fluids.
- **Forensic Anthropology:**
 - Methods of Establishing identity of Living and Dead
 - Determination of Age, Odontology, Human Anthropology
- **Post Mortem:**
 - The Post-Mortem Examination, Examination of Mutilated Bodies and Skeletal Remains
 - Appreciation of Medico-Legal Reports
- 1. Framing of Questionnaires for Doctors, Exhumation.
- **Introduction to Forensic Medicine:**
 - Medico Legal Aspects of Death- Determination of Causes and time of Death.
 - Distinction Between Homicidal, Suicidal, Accidental and Natural Deaths
 - Medico Legal Aspects of insanity
- **Body Offences:**
 - Violent Asphyxia Deaths - by Hanging, Strangulation, Throttling, Suffocation and Drowning
 - Different Types of Wounds – by Fire Arms, Sharp - Edged or Pointed Weapons or Explosive, Burns and Scalds
 - Mechanical Injuries, Death and Injuries Caused by Heat, Cold, Lightening or Electrocutation.
- **Traffic Accidents:**
 - Deaths and Injuries Arising Out of Traffic Accidents - Drunken Driving.



Forensic Analysis

- **Sexual Offences:**
 - Rape, Criminal Abortion and Infanticide and b) Medico-Legal Aspects of Insanity.
- **Toxicology:**
 - Poisons Commonly Used in India in the Commission of Crime and for Suicides – their Symptoms and Detection in Living Subjects and Dead Bodies,
 - Medical Negligence,
 - Recent Advances in Forensic Medicine
 - Chemical, Biological, Radiological and Nuclear Disasters.
- **Forensic Statistics:**
 - Type of data measure of Central Tendency Dispersion of Data, Correction, Probability and proof
- **Psychological Techniques in Forensic Science:**
 - Polygraph, Narco Analysis, Brain Mapping, Hypnosis and their legal status
- **Computer Forensics:**
 - Introduction to Computer and Cyber Crimes – Hacking, Virus, Phishing, Pornography, software piracy, program manipulation, ATM Frauds, role of forensic scientists in Computer Crime Investigation and prevention.



18. Human Resource Management

Human Resource Management

- **Business Communication**
 - *Basics of Business Communication*
 - Theory of Communication
 - Types & Modes of Communication
 - Barriers to Communication; Social and Business Barriers
 - Intra-personal, Inter-personal and Group communication
 - *Reading Comprehension*
 - *Summary Paraphrasing*
 - *Translation*
 - From Hindi/Punjabi to English and vice-versa
 - *Writing Skills*
 - Letters of all kinds
 - Tender notices
 - Auction notices
 - Public notices; memos and advertisements
- **Management Essentials**
 - *Management Thought*
 - Classical & Neo-Classical systems
 - Contingency and Contemporary Approaches to Management
 - *Planning*
 - Concept, Process & Nature of Planning
 - Steps in Planning
 - Significance and Types of Planning
 - *Decision Making*
 - Concept and Process
 - Types of Decisions
 - Management by Objectives
 - *Organization*
 - Concept & Nature
 - Process
 - Significance
 - Types of Organizations
 - Organisational Structure
 - Span of Control, Authority and Responsibility and Delegation
 - Decentralization and Departmentation
 - *Direction*
 - Concept & Features



Human Resource Management

- Importance and Limitations of Direction
- Elements of Direction- Supervision
- *Motivation*
 - Concept & Theories
 - Leadership and Communication
- *Coordination*
 - Concept & Features
 - Importance and Limitations of Coordination
 - Internal and External Coordination
- *Control*
 - Concept & Features
 - Importance and Limitations of Control.
 - Control Process
 - Essentials of a Good Control System
 - Techniques of Control
 - Relationship between Planning and Control
 - Management Accounting Principles and Standards
 - Financial Statements
 - Budgeting and Budgetary Control
 - Auditing

• **Human Resource Management**

- *Human Resource Planning*
 - Introduction & Definitions
 - Features & Need for HR Planning
 - Objectives
 - Process
 - Factors affecting HR Planning
 - Benefits
- *Job analysis*
 - Steps in analysing job & Methods of collecting Job Analysis Information
 - Job description
 - Job specification
 - Job design
 - Job simplification
 - Job rotation
 - Job enrichment
 - Job enlargement.
- *Recruitment*
 - Sources of recruitment
 - Policies and procedure of recruitment.
 - Selection process
 - Testing and interviews
 - Placement and induction.



Human Resource Management

- *Career planning and development*
- Career life cycle
 - Process of career planning and development.
- *Performance appraisal*
 - Process of performance appraisal
 - Methods and problems of performance appraisal
 - Rewards & Recognition
- *Training*
 - Importance & Theories
 - Identification of Training Needs
 - Types of Training; On the Job and Off the Job Methods of Training.
 - Designing and Evaluation of Training Programmes
- *Internal Mobility and Transfers:*
 - Definitions, Purpose, and Basis of Promotions
 - Demotions and Other Forms of Separation
 - Transfers: Purpose & Types and Transfer Policy
- *Compensation Management*
 - Concept, Principles and Practices
 - Theories of Compensation
 - Compensation in a Knowledge Based World
 - Foundations of Compensation
 - Wage & Salary Administration
 - Incentive Plans & Fringe Benefits
 - Components of Compensation
 - Compensation Laws
- *Change Management & Organization Development*
 - Models of change
 - Resistance to Change
 - Process of Organization Development
 - OD Interventions
- *Diversity & Inclusion*
 - Scenario & Challenges
 - Gender sensitivity
- *Employee Engagement*
 - Concept of Engagement
 - Quality of Work Life
 - Grievance Handling
 - Suggestion Schemes
- **Organizational Behaviour & Quantitative Methods**
 - *The Concept & Significance of Behaviour in Organizations*
 - The Changing Workforce & Employment Relationship; Informational Technology and Organisational Behaviour.
 - Individual Behaviour and Interpersonal Behaviour



Human Resource Management

- *Personality in Organisation*
 - Determinants of Personality
 - Theories of Personality
- *Workforce Emotions, Attitude and Organisational Commitment*
 - Types of Emotions
 - Managing Emotions
 - Emotional Intelligence
- *Motivation*
 - Foundations of Employees Motivation
 - Content Theories of Motivation
- *Stages of Team Development*
 - Team Norms & Team Cohesiveness
 - Work Teams: Meaning, Characteristics and Types of Teams
 - Creating effective Teams
- *Conflict*
 - Types & Sources of Conflict
 - Resolving conflict.
- *Organisational Culture*
 - Components of Culture
 - Strengthening Organisational Culture
 - Strategies to Merge Different Culture
- *Stress*
 - Causes of Stress & its Consequences
 - Stress Management Strategies
- *Leadership*
 - Leadership Theories
 - Leadership Styles
- *Introduction to Statistics*
 - Importance Features & scope of Statistics
 - Probability & Sampling
 - Measures of Central Tendency
 - Correlation & Regression

- **Information Technology**

- *Computer Fundamentals*
 - Features of Computers
 - Advantages and Limitations of Computer
 - Classification of Computers
 - Components of Computer; Input Unit, Output Unit and CPU.
 - Memory and storage: Primary Memory & Secondary memory
- *Input devices, output devices*
 - Operating System:
 - Definition and functions
- *Software:*



Human Resource Management

- Types of Software, Application software and system software
- *MS- Office*
 - MS Word - Basic Features; Create, Save, Print etc
 - MS-PowerPoint - Create a Presentation, Insert Charts &Hyperlinks
 - MS- Excel - Maintain Spreadsheets, Use Formulas, Perform Basic Functions
- *IT Enabled Work tools*
 - Video Conference tools
 - Email Applications



19. Legal Support

Legal Support
<ul style="list-style-type: none">• Constitutional Law of India<ul style="list-style-type: none">○ The Indian Constitution
<ul style="list-style-type: none">• Criminal Laws<ul style="list-style-type: none">○ Indian Evidence Act (1872), The Indian Penal Code (1860), The Code of Criminal Procedure (1973), The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act (1989), The NDPS Act (1985), POCSO Act (2012) and Prevention of Women from Domestic Violence Act (2005), Food Alteration Act 1954○ Juvenile Justice Act, 2015, Punjab Travel Professionals' Regulation Act, (2012), The Punjab Excise Act (1914), Explosives Substance Act, 1908, 1883, Unlawful Activities (Prevention) Act 1967, Arms Act 1959 (amend act 2019), Prevention of Corruption Act, 1988.
<ul style="list-style-type: none">• Civil Laws<ul style="list-style-type: none">○ The Code of Civil Procedure (1908), The Transfer of Property Act (1882), Specific Relief Act (1963), The Indian Partnership Act (1932), The Negotiable Instruments Act (1881), The Limitation Act (1963)○ The Indian Contract Act (1872) and The Information Technology Act (2000). Essential Commodities Act 1955 (further to amend 2020), Disaster Management Act 2005, Epidemic Act 2020.



20. Road Safety and Regulation

Legal Support

- **Road Safety Management**

- Road Accident Data, Source of Data and Processing of Road Accident Data, System Approach, Haddon Matrix, Road Accident Database management, Global, India and Punjab Road Accident data and its importance, Road Signage and Road Marking as per IRC, Vulnerable Road Users, Role of Different State and Central Department Concerning Road Safety and Traffic Management, Details of the Road Network in Punjab, Punjab Road Safety Policy 2014, UN Pillars of the Decade of Action on Road Safety 2011 and 202, Sustainable Development Goal and Road Safety as per UN.

- **Traffic Engineering & Management**

- Basics Understanding of Traffic and Transportation Engineering like Speed, Capacity, Volume, Level of Service, Type of Roads and Streets, Traffic Lights, Type of Intersection and its Design, Understanding of Land use, Comprehensive Mobility Plans, Smart City Mission. Different Types of Traffic Surveys like Classified Traffic Volume, Origin and Destination Surveys, Axle Load, Speed and Delay Surveys, Pedestrian Survey, Understanding of Intelligent Transport Systems, Smart Cities and Smart Roads, Use of IT and Traffic Management, Construction Zone Safety with knowledge of Traffic Diversion/Circulation Plans.

- **Road Safety Legislation**

- Motor Vehicle Act and its Amendments directly related to Road Safety and Management, Motor Vehicle Rules 1989 and its Amendments, Understanding of IPC and CrPC related to Road Accident, Traffic Management & Community Policing as per Punjab Police Act, Good Samaritan Law, and Important Traffic Challans, Motor Vehicle Driving Regulations 2017, Various Speed Related Notifications, Article 21 and Road Safety, Brasilia Declaration on Road Safety and Supreme Court Committee on Road Safety and its role.

- **Public Transport System & Parking Management**

- Urban and Rural Transport, Public Transport and Para Transit System and its Characteristics, Multimodal Integration, National Urban Transport Policy, Urban Transport Scenario in Punjab, Non-Motorized Infrastructure Planning, Pedestrian and Cyclists Network. InterCity and Intra City Public Transport System in Punjab.
- Parking Policy and Concepts, On-Street and Off Street Parking, Parking Capacity and Design, Legislation related to Parking Management, Punjab Policy on Parking, Parking and Constitutional Right, Vehicle Free Zone



Legal Support

Concepts, Different Types of Parking Management Systems, Good Practices.

- **Road Safety Audits & Road Accident Black Spot Management**

- Road Safety Engineering, Road Safety Audit Process as per Indian Road Congress Standards, Various Stages of Road Safety Audits, Road Safety Assessment and Basis Statistical methods related to it.
- Definition of Black Spots, Identification and Various Methods of Identification, Its Treatment and Methods as per Ministry of Road Transport and Highways Protocol, Long Term and Short Term Measures, Traffic Calming Devices as per Indian Roads Congress.

- **In Crash and Post-Crash Management**

- Good Samaritan Laws, Trauma Care and National Ambulance Code, Concept of Golden Hour, Highway Patrolling Systems, First Aid and Training, Crash Investigation Procedure, Safety During Foggy Weather and under adverse Climate Conditions, Legal Support to Hit and Run Cases, Third Party Insurance, Importance of Air Bag, Seat Belt and Helmet during In-Crash Scenario. , Basic understanding of advanced Vehicle Safety Technologies like Air Bag, ABS, Active and Passive vehicle safety systems and Global NCAP Vehicle Safety Ratings.

- **Software Skills**

- MS Office or Any desktop Publication Software, Knowledge of GIS and Google Maps, Open Street Softwares and Its Use, Skill Test on CAD like AutoCAD or any other Open Source Drafting Software



Let me never deviate from doing a
righteous deed

- TSS Cadre, Punjab Police