

**Government of India**  
**Ministry of Home Affairs**  
**Directorate General Border Security Force**  
**(Personnel Directorate: Recruitment Section)**

**ONLINE DETAILED ADVERTISEMENT FOR DIRECT RECRUITMENT OF GROUP -'C' POSTS (COMBATISED)**  
**(NON GAZETTED-NON MINISTERIAL) IN BSF ENGINEERING SETUP FOR THE VACANCY YEAR 2024 ///**

1. Online applications are invited from eligible and interested Male and Female Indian citizens for filling up the under mentioned vacancies in Group-'C' combatised (Non Gazetted-Non Ministerial) posts in the Border Security Force, Engineering Set up through **Online Mode only** for vacancy year 2024 :-

Name of posts	Category wise Vacancies					Total	10 % for Ex-S/Man	14-15 % for women	Pay Scale
	UR	EWS	OBC	SC	ST				
HC (Plumber)	-	-	1	-	-	1	-	-	Pay matrix level-4 (Rs.25,500-81,100) as per 7 <sup>th</sup> CPC.
HC (Carpenter)	1	-	-	-	-	1	-	-	
Constable (Generator Operator)	8	3	-	1	1	13	1	2	Pay Matrix level-3 (Rs.21,700-69,100/-) as per 7 <sup>th</sup> CPC.
Constable (Generator Mechanic)	5	2	3	2	2	14	1	2	
Constable (Lineman)	4	1	3	1	-	9	1	1	

**NOTE**

- (i) Vacancies are subject to change (may increase or decrease) due to administrative reasons. BSF reserves the right to make changes or cancel or postpone the recruitment without assigning any reason.
- (ii) Any amendment/Notice will only be published on BSF Website. Candidates in their own interest are requested to log on to <https://rectt.bsf.gov.in> for updates.
- (iii) If suitable Ex-serviceman against the reserved vacancy are not available then these vacancies will be filled by non-Ex- serviceman of respective category.

**2. NATIONALITY/CITIZENSHIP:-**

Candidate must be a citizen of India.

**3. DISQUALIFICATION:-**

No person,

- (a) who has entered into or contracted a marriage with a person having a spouse living; or
- (b) who having a spouse living, has entered into or contracted a marriage with other person, shall be eligible for appointment under these rules:

Provided that the Central Government may, if satisfied that such marriage is permissible under the personal law applicable to such person and the other party to the marriage and that there are other grounds for so doing, exempt any person from the operation of this rule.

**4. ELIGIBILITY CONDITIONS:-**

**(A) AGE LIMIT**

S.N	Name of Post	Age
1.	HC (Plumber)	Between 18 to 25 years as on the closing date of receipt of online applications.
2.	HC (Carpenter)	Between 18 to 25 years as on the closing date of receipt of online applications.
3.	Constable (Generator Operator)	Between 18 to 25 years as on the closing date of receipt of online applications.
4.	Constable (Generator Mechanic)	Between 18 to 25 years as on the closing date of receipt of online applications.
5.	Constable ( Lineman)	Between 18 to 25 years as on the closing date of receipt of online applications.

Note- Crucial date for determine the age limit in each case shall be closing date on receipt of online application.

**RELAXATIONS OF UPPER AGE LIMIT ARE AS UNDER:-**

Age relaxation to different category of eligible candidates for obtaining age Relaxation are as under :-

S/N	Category	Age Relaxation permissible beyond the upper age limit
1.	SC/ST	05 years
2.	OBC	03 years
3.	Ex-Servicemen (Unreserved)	03 years after deduction of the military service rendered from the actual age as on the closing date.
4.	Ex-Servicemen (OBC)	06 (3 years + 3 years) years after deduction of the military service rendered from the actual age as on the closing date.
5.	Ex-Servicemen (SC/ST)	08 (3 years + 5 years) years after deduction of the military service rendered from the actual age as on the closing date.
6.	<b>Government Servants (UR)</b> who have rendered not less than 3 years regular and continue service as on closing date.	05 years
7.	<b>Government Servants (OBC)</b> who have rendered not less than 3 years regular and continue service as on closing date.	08 ( 5 +3 ) years
8.	<b>Government Servants (SC/ST)</b> who have rendered not less than 3 years regular and continue service as on closing date.	10 ( 5 + 5 ) years
9.	<b>Central Govt. Civilian Employees and Departmental Candidates (Unreserved, EWS &amp; OBC)</b> who have rendered at least 3 years continuous service as on closing date.	Upto the age of 40 years.
10.	<b>Central Govt. Civilian Employees and Departmental Candidates (SC/ST)</b> who have rendered not less than 3 years regular and continuous service as on closing date.	Upto the age of 45 years
11.	Widows, divorced women and women judicially separated from their husbands and who are not re-married <b>(UR)</b>	Maximum age limit 35 years
12.	Widows, divorced women and women judicially separated from their husbands and who are not re-married <b>(OBC)</b>	Maximum age limit 38 years (35 +3 ) years
13.	Widows, divorced women and women judicially separated from their husbands and who are not re-married <b>(SC/ST)</b>	Maximum age limit 40 years (35 +5 ) years
14.	Candidate and dependent family of those killed in the <b>communal riots of the year 1984 and Gujarat riots of the year 2002 (UR)</b>	05 years
15.	Candidate and dependent family of those killed in the <b>communal riots of the year 1984 and Gujarat riots of the year 2002 (OBC)</b>	08 years (5 + 3) years
16.	Candidate and dependent family of those killed in the <b>communal riots of the year 1984 and Gujarat riots of the year 2002 (SC/ST)</b>	10 years (5+5) years

## NOTE

- (i) Age of candidates will be determined on the basis of Date of Birth as recorded in their matriculation certificates available on the closing date of submission of application and no subsequent request for its change will be considered or granted.
- (ii) Prescribed format of certificate for reserved categories are attached as per Annexure-'B' for SC/ST, Annexure - 'B-1' for EWS and Annexure - 'C' & C1 for OBC category.
- (iii) Relaxation of respective category will only be given in those cases where vacancies are available in the respective category for the applied post. If vacancies are not available in respective reserved category, candidates applied will be treated as '**Un-Reserved**' candidate, if he/she fulfill the eligibility conditions applicable to Un-reserved candidate. In that case, if found later that candidate does not fulfill the criteria of General category; candidature will be rejected at any stage of the examination.
- (iv) A person seeking appointment on the basis of reservation to EWS must ensure that he/she possesses the EWS certificate according to term and condition mentioned as per prescribed format shown at **Annexure-B-1** on the crucial date. The crucial date for this purpose will be the closing date for receipt of applications.
- (v) Every candidate seeking reservation as OBC is required to submit a certificate in prescribed format (**Annexure-'C'**) regarding his/her OBC status and non-creamy layer status issued by the Competent Authority. Candidates claiming OBC status may ensure that he/she possess caste/community certificate and does not fall in creamy layer on the crucial date i.e. closing date for receipt of application. (In order to ensure it, a declaration in addition to the certificate issued by the Competent Authority will also be obtained from the candidates seeking reservation as OBC in the format attached as **Annexure-'C-1'**).
- (vi) Judicially separated/divorce women who claims age relaxation shall be required to produce a copy of the judgment/decree of the appropriate Court to prove the fact of divorce or the judicial separation.

## (B) EDUCATIONAL QUALIFICATION

S.N	Name of Post	Educational Qualification
1.	HC (Plumber)	Matriculation pass or its equivalent with Industrial Training Institute (ITI) Certificate in the trade of <b>Plumber</b> or three years' experience in the respective trade from reputed firm.
2.	HC (Carpenter)	Matriculation pass or its equivalent with Industrial Training Institute (ITI) Certificate in the trade of <b>Carpenter</b> or three years' experience in the respective trade from reputed firm.
3.	Constable (Generator Operator)	Matriculation or equivalent from a recognized Board with Industrial Training Institute Certificate in the trade (i.e. <b>Electrician or Wireman or Diesel /Motor Mechanic</b> ) from a recognized institute and three years' experience in the respective trade from a firm recognized by the Central or State Government.
4.	Constable (Generator Mechanic)	Matriculation or equivalent from recognized Board with Industrial Training Institute Certificate in <b>Diesel/Motor Mechanic</b> from a recognized institute and three years' experience in the respective trade from a firm recognized by the Central or State Government.
5.	Constable (Lineman)	Matriculation or equivalent from recognized Board with Industrial Training Institute Certificate from a recognized institute in the trade of <b>Electrical Wireman or Lineman</b> and three years' experience in the respective trade from a firm recognized by the Central or State Government.

*BR 10/2021*

(C) **PHYSICAL STANDARDS**

(i) **For the post of Head Constable (Plumber), Head Constable (Carpenter) :-**

Measurement	Male	Female
Height	165 Cms. (Relaxable by 5 cms for Hill Tribes and Adivasis including Mizos and Nagas)	157 Cms.
Chest	76 Cms. (Un-expanded) 81 Cms. (Expanded) (Relaxable by 2 cms for candidate below 20 years of age)	Not applicable.
Weight	Proportionate to height and age as per Medical Standards.	According to height but not less than 46 Kgs.

(ii) **For the post of Constable (Generator Operator), Constable (Generator Mechanic), Constable (Lineman) :-**

Measurement	Male	Female
Height	165 Cms. (The minimum standard so far as it relates to height may be relaxed to 162.5 cms in respect of persons belonging to the races namely Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas, Sikkimies, persons hailing from Leh and Ladakh, Kashmir valley, North Eastern States and the state of Himachal Pradesh. Also relaxable to 160 cms in respect of Scheduled Tribes and Adivasi including Mizos and Nagas.)	157Cms. (The minimum standard so far as it relates to height may be relaxed to 155 cms in respect of persons belonging to the races namely Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas, Sikkimies, persons hailing from Leh and Ladakh, Kashmir valley, North Eastern States and the state of Himachal Pradesh. Also relaxable to 150 cms in respect of Scheduled Tribes and Adivasi including Mizos and Nagas.)
Chest	76 Cms. (Un-expanded) 81 Cms. (Expanded) (Relaxable by 2 Cms for candidates below 20 years of age)	Not applicable
Weight	Proportionate to height and age as per Medical Standards	According to height but not less than 46 Kgs

**NOTE :-**

Relaxation in height and chest to the eligible candidates will be permissible only on production of certificate issued by District Authorities where they ordinarily reside(s). Post wise prescribed formats with showing relaxation where applicable is enclosed herewith as per **Annexure – 'D', 'D'-1 & 'D'-2.**

(D) **MEDICAL STANDARDS**

(i) **For the post of Head Constable (Plumber), Head Constable (Carpenter), Constable (Generator Operator), Constable (Generator Mechanic) and Constable (Lineman)**

The Candidates should having following medical standards :-

(i) **Eye Sight :-**

Visual Acuity unaided (Near Vision)		Uncorrected Visual acuity (Distant Vision)		Refraction	Remarks
Better eye	Worse eye	Better eye	Worse eye		
N6	N9	6/6	6/9	Visual correction of any kind is not permitted even by the glasses	In right handed person, the right eye is better eye and vice versa. Binocular vision is required

- (a) The candidates must not have knock knees, flat foot, varicose vein or squint in eyes and they should possess CP III by ISIHARA book. The candidates will be tested for color vision by ISHAHARA's test as well as Edrich-Green Lantern Test.
- (b) Candidates must be in good mental and bodily health and free from any physical defect or deformity likely to interfere with the efficient performance of the duties.
- (c) The Medical Examination will be conducted as per revised uniform guidelines of Medical Examination for recruitment in the CAPFs & AR as circulated by MHA vide their Office memorandum No.A-VI-1/2014-Rectt(SSB) dated 20th May 2015, Revised uniform guidelines for Review Medical Examination in CAPFs & AR for GO's & NGO's circulated by MHA (Police-II Division) vide their office Memorandum No.E.32012/ADG(Med)/DME& RME/DA-1/2020/1166 dated 31 May'2021 and subsequent amendment thereof.

(d) TATTOO :-

- **Content:** - Being a secular country, the religious sentiments of our countrymen are to be respected and thus, tattoos depicting religious symbol or figures and the name, as followed in Indian Army are permitted.
  - **Location:** - Tattoos marked on traditional sites of the body like inner aspect of forearm but only left forearm, being non saluting limb or dorsum of the hands are to be allowed.
  - **Size:** - Size must be less than  $\frac{1}{4}$  of the particular part (Elbow or hand) of the body.
  - In case of candidate has undergone removal of tattoo (s) prior to appearing for recruitment process and the same has faded substantially, this will be treated as a "scar" and not a tattoo. Such candidate will be permitted to undergo the entire selection process with approval of Presiding officer of the recruitment Board. Further, the scar resulting due to removal of tattoo will be reviewed by the Medical Board of officers during detailed Medical examination.
- (e) The medical examination will be done as per the parameters issued by MHA in Medical Manual dated 20/05/2015, Revised uniform guidelines for Review Medical Examination circulated by MHA (Police-II Division) vide their office Memorandum No.1166 dated 31 May'2021 and subsequent amendment thereof.
- On completion of detailed medical examination, if a candidate is declared Medically Unfit during detailed medical examination, he/she will be allowed to undergo Review Medical Examination (RME), provided they give their written consent by appending their signature on the intimation indicating reasons for being unfit, as per **Annexure- E'**. Review Medical Examination (RME) of candidates will be conducted in continuation of DME preferably on the next day of DME. The consent for RME as per **Annexure-'E'** duly signed by the candidate should be submitted within 24 hrs after he/she is informed of his/her unfitness in DME. Review Medical Examination (RME) is conducted to rule out the possibility of an **Error of Judgement** in the decision of initial Medical Board/DME board. Decision of Review Medical board will be final. No appeal/representation against the decision of Review Medical board will be entertained.

5. PROCESS OF CERTIFICATION AND FORMAT OF CERTIFICATES:

Candidates who wish to be considered against vacancies reserved/or seek age-relaxation must submit requisite certificate issued by the Competent Authority in the prescribed format when such certificate are sought by the concerned selection board at the time of documentation. Otherwise, their claim for EWS/SC/ST/OBC/Ex-Serviceman status will not be entertained and their candidature/applications will be considered under **Un-Reserved category**. The formats of the certificates are annexed. Certificates obtained in any other format will not be accepted.



## NOTE

- (i) Candidates are warned that they will be permanently debarred from the examination conducted by the BSF in case they fraudulently claim EWS/SC/ST/OBC /Ex-serviceman status.
- (ii) Candidates should note that the Date of Birth as recorded in the Matriculation/Secondary Examination Certificate or an equivalent certificate available on the closing date of submission of application will be accepted for determining the age and no subsequent request for its change will be considered or granted.

## 6. SELECTION PROCEDURE

### (A) POST OF HEAD CONSTABLE (PLUMBER), HEAD CONSTABLE (CARPENTER), CONSTABLE (GENERATOR OPERATOR), CONSTABLE (GENERATOR MECHANIC) AND CONSTABLE (LINEMAN)

The selection procedure for the post of Head Constable (Plumber), Head Constable (Carpenter), Constable (Generator Operator), Constable (Generator Mechanic) and Constable (Lineman) will be as under:-

#### (i) FIRST PHASE

##### (a) WRITTEN EXAMINATION FOR THE POST OF HEAD CONSTABLE (PLUMBER), HEAD CONSTABLE (CARPENTER), CONSTABLE (GENERATOR OPERATOR), CONSTABLE (GENERATOR MECHANIC) AND CONSTABLE (LINEMAN)

1<sup>st</sup> phase of examination i.e Written Exam will be conducted at the Examination Centres. There will be one composite paper for two hours duration. Question papers will be Objective Type with multiple choices on OMR based answer sheet and shall be consisting of the following subjects:-

	Subjects	Nos of Questions	Marks	Duration
Part-A	General intelligence & Reasoning	20 Questions	20 Marks	02 Hrs
Part-B	General awareness	20 Questions	20 Marks	
Part-C	Technical Subjects	60 Questions	60 Marks	
	<b>Total</b>	<b>100 Questions</b>	<b>100 Marks</b>	

**Note:-** The standards of technical subject shall be of "Industrial Training Institute (ITI) certificate level of the respective trade". Post wise syllabus of technical subject is enclosed as per Annexure-E2 to E-5.

##### (b) QUALIFYING MARKS OF WRITTEN EXAM

- (i) For General/EWS/OBC category candidates - 45%
- (ii) For SC/ST category candidates - 40%

## NOTE

- (i) Number of candidates to be qualified in written examination will be restricted maximum ten times of number of vacancies or all qualified candidates whichever is less, for appearing in 2nd phase examination. There will be no re-evaluation of answer sheet.
- (ii) Candidates are not permitted to use Mobile Phone, Calculator or any other electronic/electrical device for answering any paper (Test Booklets). Candidates will not bring Mobile Phone, Calculator or any other electronic/electrical device inside the Examination premises. Possession of these items, whether in use or not, will be considered as "use of unfair means" in the Examination and appropriate action will be taken by the department against such candidates, as per extant policy of the department.
- (iii) The written examination will be conducted on OMR based answer sheet. If the candidate did not properly shade/wrongly shaded /did not fill/wrongly filled his/her mandatory data ovals i.e. Roll number, question booklet series code and category in the OMR Answer sheet, it will be rejected at the initial stage and the OMR answer sheet will not be further evaluated for which candidate himself will be responsible for such rejection.

(ii) **SECOND PHASE EXAMINATION**

Successful candidates in 1<sup>st</sup> phase Examination i.e Written Examination will appear before the selection board for Second Phase Examination (i.e. Documentation, Physical Standards Test, Physical Efficiency Test, Practical/Trade Test & Medical Examination and Re-Medical Examination) on due date at the Centre which will be communicated to them through E-Mail address/SMS for call letters through online. They will be put through subsequent stages of test. Candidates have to qualify all the stages of the Second phase examination one by one. Any candidate not qualifying in any of the events of examination will be eliminated from the process of recruitment.

(a) **DOCUMENTATION**

Original testimonials/certificates of the candidate will be checked to confirm the eligibility of the candidates at the Centre on the date and time fixed by the department which will be communicated to the candidates through E-Mail address/SMS for call letters/admit cards through online. If candidate does not produce original documents like age, education/technical qualification, caste certificate, experience certificate etc, he/she will be disqualified.

(b) **PHYSICAL STANDARDS TEST (PST)**

Candidates qualified in the Documentation will be put through the Physical Standards Test (PST). PST will be carried out by the selection board to assess the Height, Chest and Weight of the candidates according to the Physical Standards post wise mentioned at **Para- 4 (C) (i to iii)** above.

**NOTE :-**

(i) Candidates declared disqualified in PST (i.e Height and Chest), may prefer an appeal immediately at the venue of the PST itself, if they so desire, to the Presiding Officer of Board. The appellate authority will re-measure the Physical Standards of such candidate and the decision of appellate authority in this regard will be final and no further appeal or representation in this regard shall be entertained. Weight will not be criteria for rejection at the time of PST, but it will be checked during Medical Examination.

(ii) Candidate will be put through subsequent stages. Candidates have to qualify all the stages of the examination one by one. Any candidate not qualifying in any of the events of examination will be eliminated from the process of recruitment.

(c) **PHYSICAL EFFICIENCY TEST (PET)**

Those candidates found fit in Physical Standards Test (PST) will be put through Physical Efficiency Test (PET), which will be qualifying in nature. The post wise PET norms are as under :-

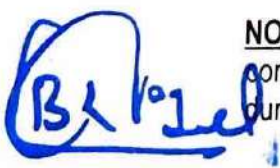
(i) **FOR THE POST OF HC (PLUMBER), HC(CARPENTER), CONSTABLE (GENERATOR OPERATOR), CONSTABLE (GENERATOR MECHANIC) AND CONSTABLE (LINEMAN)**

S/N	Events	Male	Female
1.	Run	1.6 Km in 6.5 minutes	800 Mtrs in 04 minutes
2.	Long Jump	11 Feet (03 chances to be given)	09 Feet (03 chances to be given)
3.	High Jump	3½ Feet (03 chances to be given)	03 Feet (03 chances to be given)

**NOTE -I:** Ex-Servicemen are not required to undergo PET. But PST and detailed medical Examination will be conducted.

**NOTE -II:** On reporting of female candidates for PST (Physical standard Test)/PET ( Physical Efficiency Test), a self-declaration indicating about her pregnancy status shall be submitted. In case, if she declared that she is not pregnant then, she may be allowed to participate in the PST/PET. In case of false declaration, all the risk of undergoing PST/PET will be of her own.

**NOTE-III:** If the female candidates declared that she is pregnant before PST/PET, then a confirmatory pregnancy test to be done and in case she is found to be pregnant irrespective of duration of pregnancy 12 weeks standing or over/less, she may be declared temporarily unfit and



her appointment shall be held in abeyance until the confinement is over. The vacancy against which a women candidate was selected should be kept reserved for her. She should be re-examined for PST/PET six weeks after the date of confinement, subject to the production of the medical certificate of fitness from a registered medical practitioner. If she is found fit she may be appointed to the post kept reserved for and allow the benefit of seniority in accordance with the instructions of the Government, as amended from time to time". In case female candidates is found negative for pregnancy, she may be allowed to participate in the PST/PET.

(d) **PRACTICAL/TRADE TEST**

Candidates declared qualified in second phase examination i.e Documentation, PST & PET will be eligible/allowed to appear in the Practical/Trade Test, which is qualifying in nature.

(e) **MEDICAL EXAMINATION**

Candidates who will qualify in all the above stages of examination i.e. Written Examination, Documentation, PST, PET and Practical/Trade test will undergo detail Medical Examination, which will be conducted by a Medical board to assess their fitness. If, a candidate is declared Medically Unfit during detail medical examination, he/she will be allowed to undergo Review Medical Examination (RME), provided they give their written consent by appending their signature on the intimation indicating reasons for being unfit, as per **Annexure-'E'**. Review Medical Examination (RME) of candidates will be conducted in continuation of Detailed Medical Examination preferably on the next day of DME. The consent for Re-Medical Examination as per **Annexure-'E'** duly signed by the candidate should be submitted within 24 hrs after he/she is informed of his/her unfitness in DME. Review Medical Examination (RME) is conducted to rule out the possibility of an **Error of Judgement** in the decision of initial Medical Board/DME board. Decision of Review Medical board will be final. No appeal/representation against the decision of Review Medical board will be entertained.

7. **DRAWAL OF FINAL MERIT LIST**

(a) After completion of Medical examination, post wise and category wise merit list will be drawn separately on the basis of marks secured/obtained by the candidates in the written examination. In cases of tie in marks, tie cases will be resolved in the following manner :-

- i) Marks in written examination.
- ii) Date of Birth, with older candidates placed higher.
- iii) Alphabetical order in the first names of the candidates appear.

- (b) The list of finally selected candidates will be published on BSF website ([rectt.bsf.gov.in](http://rectt.bsf.gov.in))  
(c) No waiting list shall be maintained/kept.

8. **HOW TO APPLY**

The application by the candidates must be submitted through **ONLINE mode** only. No other mode for submission of application will be accepted. **The facility for submission of online application will be opened on BSF website <https://rectt.bsf.gov.in> w.e.f 17/03/2024 at 00:01 AM and will be closed on 15/04/2024 at 23:59 PM.** Procedure for submission of online application is attached with this advertisement as per **Annexure – 'A'**.

9. **APPLICATION FEES AND MODE OF PAYMENT**

Candidates to pay Rs.100/- (Rupees one hundred only) as examination fee plus Rs.47.20 service charges levied by Common Service Centre (CSC) through the following payment modes:-

- (i) Net banking of any bank.
- (ii) Credit/Debit Card of any bank.
- (iii) Nearest authorised Common Service Centre



**NOTE :-**

- (i) Female candidates of all categories and candidates belonging to Scheduled Caste, Scheduled Tribes, BSF serving personnel and Ex-Servicemen are exempted from payment of examination fee.
- (ii) Payment of examination will be accepted only through Online mode
- (iii) Fee once paid will not be refunded under any circumstances.
- (iv) In case of non-receipt of examination fee from the candidates of non-exempted categories, their form will not be accepted.

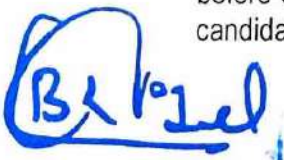
**10. RECRUITMENT CENTRES**

The candidates can opt one of the following nearest centre for appearing in different selection stages of recruitment process :-

S/ No.	Name of Centre	Address of Location/Address	Responsibility
(i)	Guwahati	Frontier Headquarter, BSF Guwahati, Post Office - Azara, Distt- Kamrup, Guwahati, Assam-781017	Ftr HQ BSF Guwahati
(ii)	Kolkata	Frontier Headquarter BSF South Bengal, New Town, Rajarhat, Kolkata P.O- New Town Action area IIE, Plot No.2E/1, (Rajarhat),Kolkata (West Bengal) - 700161	Frontier HQ BSF South Bengal
(iii)	Hazaribagh	TC&S BSF Hazaribagh, Meru Camp, Hazaribagh, Jharkhand-825317	TC&S Hazaribagh
(iv)	Delhi	IG (HQ) FHQ, East Block-09, Level-04, R K Puram, New Delhi-110066	IG (HQ) FHQ BSF New Delhi
(v)	Jodhpur	Frontier Headquarter, BSF Rajasthan, Post Office- BSF Campus Mandore Road, Distt- Jodhpur, Rajasthan-342026	Ftr HQ BSF Rajasthan
(vi)	Jalandhar	Frontier Headquarter, BSF Punjab, Post Office- BSF Campus, Jalandhar Cantt, Punjab-144006	Ftr HQ BSF Punjab
(vii)	Bengaluru	Frontier Headquarter (SPL OPS) BSF at Bengaluru, Post Office- AF Station Yelahanka, Bengaluru, Karnataka-560063	Ftr HQ (Spl OPS) at Bengaluru.
(viii)	Gandhinagar	Frontier Headquarter BSF Gujarat, BSF Campus Ghandhinagar, Chiloda Road Distt- Gandhinagar (Gujarat) 382042	Frontier HQ BSF Gujarat
(ix)	Indore	CSWT BSF Indore, Bijasan Road, BSF Campus, Indore (MP) – 452005	CSWT BSF Indore
(x)	Jammu	Frontier Headquarter BSF Jammu, Paloura Camp Jammu (J&K)-181124	Frontier HQ BSF Jammu

**NOTE :-**

- (i) Centre for conduct of exam may change at any stage of examination, if required, due to administrative reasons.
- (ii) The candidates applying for the examination should ensure that they fulfil all the eligibility conditions for admission to the Selection Test. Their admission at all the stages of examination will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If, on verification, at any time before or after the Selection Test, it is found that they do not fulfil any of the eligibility conditions, their candidature for the examination will be cancelled by the Department.



## 11. IMPORTANT INSTRUCTIONS TO CANDIDATES

1.	Before applying online application, Candidates are advised to go through the requirement of educational /technical qualification, age, physical standards, physical efficiency test etc and satisfy themselves that they are eligible for the post before applying. BSF reserves the right to cancel the candidature of any candidate at any stage of the selection process, if he/she is found not qualifying any of the prescribed eligibility criteria. This detailed advertisement is available on the BSF website <a href="http://rectt.bsf.gov.in">rectt.bsf.gov.in</a> .
2.	Candidates seeking reservation benefits for Govt. Servant/EWS/OBC/SC/ST/Ex-Serviceman must ensure that they are entitled to such reservation as per eligibility prescribed in the notice according to vacancy of the posts. They should also be in possession of the certificates in the format prescribed by Government of India in support of their claim at the time of application.
3.	Central Government Servants claiming age relaxation should be in possession of a certificate in the prescribed format from their office, in respect of the length of continuous service which should be not less than three years in the immediate period preceding the closing date for receipt of application.
4.	Qualifying the selection stages of recruitment process doesn't confer any right to candidates for appointment. Final selection of candidate will be made purely on merit.
5.	When application is successfully submitted, it will be accepted provisionally. Candidate may take printout of the application form for their own records. <b>Printout of the application form is not required to be submitted to BSF recruitment centres.</b> Candidates are also advised to fill their correct and active e-mail addresses and mobile number in the online application as correspondence may be made through E-mail/SMS.
6.	Candidate should note down and retain 'Registration-ID' and 'Password' provided to them while making 'One-Time Registration' which is required for filling online application.
7.	Only online application is to be submitted by a candidate. Therefore, the candidates are advised to exercise due diligence at the time of filling their application form. Also ensure that all the particulars of application form must be filled up as given in the matriculation certificate otherwise their candidature may be cancelled at the time of documentation or as and when it comes into the notice of the board.
8.	Candidates will fill up personal basic information through online in the application form with correct entry like name of the post, candidate's name, father's name, address, category, DOB, marital status, mobile number, E-mail address, educational/technical qualification etc and thoroughly check all the entries.
9.	<b>Candidates to refrain themselves from filling wrong information in their application form, uploading fake photograph of any other person/celebrity/dignitaries or object or puts blank photo etc., suitable action will be taken against such defaulter candidates as per provisions under Cyber Crime IT Act 2000.</b>
10.	Applications with illegible/blurred photographs/Signature will be rejected summarily.
11.	Candidate serving in Government/Semi Government/Public Sector undertakings should apply after obtaining NOC. No objection certificate (NOC) from their employer will be required with application form.
12.	Candidate are required to upload their all essential Educational/technical certificates as per post criteria mentioned in online detailed advertisement at Para No.4 (B) and other documents/certificate as per their category to support their claims. They should ensure they fulfil all the eligibility conditions for admission to the posts. <b>If during scrutiny of the online application, it is found that candidate does not fulfil any of the eligibility conditions, his/her application will be rejected by the Recruitment Selection Board.</b>
13.	All eligible candidates who apply in response to this advertisement before the closing date will be assigned Roll Numbers, if they fulfil the term and condition as given in this advertisement and found eligible for the post. Only such eligible candidates will be communicated through E-mail address/SMS for Call letters/Admit Cards through online mode for appearing in the first phase selection process. However, any candidate found not eligible at later stage in any aspect his/her candidature will be cancelled. The admit cards for all the phases of examination will be made/uploaded on the website only. Therefore candidates are advised to visit the BSF website for upcoming latest information of the all the phases of Examination.
14.	The recruitment board shall not be liable for any claim arising out of any injury etc. suffered during the tests. The decision of the recruitment board shall be final in all matters connected with this recruitment.
15.	The appointment will be subject to the conditions that the candidates are medically as well as physically fit. The selected candidates will have to undergo Basic Training at any of the Training Institutions of BSF. The services of those candidates who fail to complete the training successfully are liable to be terminated.
16.	Candidates belonging to the Physically Handicapped category are NOT ELIGIBLE to apply for this examination.

17.	Intimation regarding issue of Admit cards/call letters and any other important information pertaining to recruitment will be sent on the e-mail address or mobile number of candidates given by the candidates at the time of One Time Registration (OTR). BSF will not be responsible for any technical issue arisen due to inactive e-mail address or invalid mobile numbers. Hence, candidates are advised to ensure that active e-mail ID & mobile number must be used for OTR.
18.	Mobile, Calculator and other Electronic Gadgets are banned within the premises of the Examination Centre.
19.	The posts carries all India service liability. The selected candidates are liable to be posted anywhere in the Country as per the transfer policy of the Force.
20.	The recruitment will be done on All India Basis.
21.	Selected candidate will be governed by BSF Act and Rules.
22.	On appointment they shall be entitled for pension benefits as per the " <b>New Restructured Defined Contributory Pension Scheme</b> " applicable for the new entrants to the Central Government services w.e.f. 1st January, 2004.
23.	A candidate shall have the choice to appear for the recruitment at only one centre i.e the centre in which he/she opts while filling online applications. The centre he/she opts will be his/her recruitment centre. No request for change of Recruitment centre will be allowed/accepted under any circumstances. The Department reserves the right to cancel the centre and ask the candidates of that centre to appear from another centre. Department also reserve the right to divert candidates of any centre to some other centre to take the examination on administrative grounds.
24.	The candidates will have to make their own arrangements for stay during the course of appearing in recruitment process.
25.	No TA/DA will be paid to any candidate for appearing in the recruitment process.
26.	In case, candidates are appointed in BSF and subsequently seek resignation or discharge before completion of 10 years service, they shall be required to remit an amount equal to three months pay and allowances or the cost of training imparted to them, whichever is higher as per rules to the Government.
27.	Beware of touts. No money is charged for recruitment in BSF. If you have paid or promised to pay money to any one, you are cheated and you are losing money. If anyone demands money or promises recruitment, you should immediately inform the same to the Presiding Officer (PO) of the concerned recruitment centre.
28.	Appealing in any form or bringing outside influence will automatically disqualify the candidate from appearing in recruitment.
29.	The decision of the department in all matters relating to eligibility, acceptance or rejection of the application, mode of selection, medical examination etc. will be final and binding on the candidates. No enquiry/correspondence will be entertained in this regard.
30.	The department holds the right to make any changes in the advertisement or cancel it without assigning any reason.
31.	Candidates are advised to visit BSF website <a href="http://rectt.bsf.gov.in">rectt.bsf.gov.in</a> from time to time to know latest updates of recruitment process.
32.	An Employee serving in the same rank and pay grade will not be entitled to apply for said posts.
33.	Candidate must carry Admit card with one valid photo ID proof, which is required at the Examination venue for entering in selection test, failing which they will not be allowed to appear for the same. Besides above, candidates may carry two passport size recent colour photographs with him for necessary action as required.

## 12. ACTION AGAINST CANDIDATES FOUND GUILTY FOR MISCONDUCT

Candidates are warned that they should not furnish any particulars that are false or suppress any material information while filling the online application form. If there is any inaccuracy or any discrepancy is found in OMR answer sheet, their OMR answer sheets will be held invalid and will not be further evaluated.

Involvement of candidates in any of the following activities will render their candidature debarred from appearing in recruitment :-


- (i) Possession of Mobile phone, accessories or any other electronic gadget whether in use or in switch off mode.
  - (ii) Impersonate/procuring impersonation by any person.
  - (iii) Submitting fabricated documents or documents which have been tampered with.
  - (iv) Making statements which are incorrect or false or suppressing material information.
- Resorting to any other irregular/improper/unfair means for qualifying the examination.



- (vi) Misbehaving in any other manner in the examination hall with the invigilator or any of exam functionaries.
- (vii) Besides above, candidature of candidates can be cancelled at any stage of the recruitment for any other ground which the BSF considers to be sufficient cause for cancellation of candidature.

**13. COURTS JURISDICTION**

Any dispute in regard to this recruitment will be subject to Courts/Tribunals having jurisdiction over the City/Town in which the concerned centre/office of BSF is situated and candidate has opted in his/her application.

  
(Amar Bir Singh)  
Commandant (Recr.)  
13 Mar' 2024

**PROCEDURE/INSTRUCTIONS FOR REGISTRATION AND SUBMISSION OF ONLINE APPLICATION FORMS**

- (a) Candidates must apply online by visiting BSF website <http://rectt.bsf.gov.in>. No other mode for submission of application will be accepted. Online submission of application form comprises of following steps :-
- (i) **One Time Registration (OTR). (STEP-I)**
  - (ii) **Filling of online application. (STEP-II)**
  - (iii) **Payment of examination fee through prescribed digital modes. (STEP-III)**
- (b) In STEP-I, candidates should first complete '**ONE TIME REGISTRATION**' (OTR) process by filling basic information relating to them i.e Name, Mobile Number and E-mail ID. Candidates to ensure that, only active/functional mobile number and E-mail ID must be used for **One Time Registration** purpose.
- (c) On submission of information, candidates will receive their **Registration ID and password** on their given mobile number as well as E-mail address. **Candidates are advised to keep memorize the Registration ID and password as the same will be essential to obtain access to your profile throughout the entire recruitment process.**
- (d) After completing the registration part, candidates can view the active advertisements under '**ONLINE APPLICATION**' link by logging in using their credentials.
- (e) In STEP-II, candidates can apply for Recruitment to the posts as mentioned in the detailed advertisement at para-1 by clicking on '**APPLY HERE**' link available next to relevant advertisement.
- (f) Candidate are advised to read the instructions mentioned in recruitment notification carefully before proceeding to online submission of online application form.
- (g) After reading the instructions, candidates should carefully fill the relevant fields of online application form and upload all essential documents (as mentioned in para No.4 (B) of detailed advertisement and other documents as per their category, photograph, signature and Thumb impression. Mandatory fields are marked with \* (asterisk) sign. Only the application of candidate who fulfilling eligibility conditions will be accepted by system.
- (h) Candidates will have to fill basic personal information. After filling up all relevant information, candidate can see complete preview of their application form. If candidate desires to make any correction, then press "back". **No correction in the application can be made after clicking "submit" button. Hence, candidates are advised to press "submit" button only after confirmation of correctness of filled information by him/her.**
- (j) The digital size of photographs-30 to 100 kb, signature-20 to 50 kb, qualification documents 30 to 100 kb and thumb impression should not be more than 50 KB. Photographs and signature must be clearly visible and latest photographs must be uploaded. Format should be jpg,jpeg,png formats.
- (i) Candidates should thoroughly check all the entries filled in the online application form, before final submission. In case of any discrepancy, relevant entry may be corrected/edited. After final submission of online application, no change in any particular shall be allowed.

*BR Patel*

- (k) In STEP-III, the candidates are required to make fee payment (Candidates who are exempted from fee payment are not required to pay fee). Fee can be paid through Net banking, Debit Card, Credit Card and nearest Common Service Centre. Candidate's application will not be considered if fee is not paid for that application.
- (l) Candidates are required to follow below mentioned procedure to pay the fees :-
- After login, Application history is visible at the bottom side of page.
  - Candidates will be able to see applications submitted by him to the advertisement with fees payment status. Applications for which fees payment status is unpaid. Pay now link will be available there.
  - Three options will be available after clicking on pay now link.  
a) Net banking b) Debit card c) Credit card.
- (m) After shown successful completion of fee payment, application will be completed. Candidates may take printout of this application for their own record. **Printout of application are not required to be sent to BSF.**
- (n) Online application submission will be completed after payment of examination fee.

**Note :** All eligible candidates who apply in response to this advertisement before the closing date will be assigned Roll Numbers, if they fulfill the term and condition as given in this advertisement and found eligible for the post. Only such eligible candidates will be communicated through E-mail address/SMS for Call letters/Admit Cards through online mode for appearing in the various selection process i.e Written Examination, Documentation, PST/PET, Practical/Trade Test and Medical Examination. However, any candidate found not eligible at later stage in any aspect, his/her candidature will be cancelled. The admit cards related information for all the phases of examination will be made/uploaded on the website only. Therefore candidates are advised to visit the BSF website for upcoming latest information of the all the phases of Examination.

## FORM OF CASTE CERTIFICATE FOR SC/ST

This is to certify that Shri\*/Shrimati/Kumari \_\_\_\_\_ Son/Daughter of  
 \_\_\_\_\_ Village/Town \_\_\_\_\_ /District/Division\*  
 of the \_\_\_\_\_ State/Union Territory belongs to the \_\_\_\_\_  
 Caste\*/Tribe which is recognized as a Schedule Caste/Tribe under:-

- \* The Constitution Schedule Caste Order, 1950.
- \* The Constitution Schedule Tribe Order, 1950.
- \* The Constitution (Schedule Caste) (Union Territories) (Part C States) Order, 1951;
- \* The Constitution (Schedule Tribes) (Union Territories) (Part C States) Order, 1951;  
 [ As amended by the Schedule Castes and Scheduled Tribes List (Modification Order, 1956, the Bombay Reorganization Act, 1960, the Punjab Reorganization Act, 1966, the State of Himachal Pradesh Act, 1970, the North Eastern Areas (Reorganization) Act, 1971 and the Schedule Castes and Scheduled Tribes Order (Amendment) Act, 1976.]
- \* The Constitution (Jammu and Kashmir)\* Scheduled Caste Orders, 1956.
- \* The Constitution (Andaman and Nicobar Islands)\* Scheduled Tribes Order, 1959, as amended by the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976.
- \* The Constitution (Dadra and Nagar Haveli)\* Scheduled Castes Order, 1962.
- \* The Constitution (Dadra and Nagar Haveli)\* Scheduled Tribes Order, 1962.
- \* The Constitution (Pondicherry) Scheduled Castes Order, 1964.
- \* The Constitution (Uttar Pradesh) Scheduled Tribes Order, 1967.
- \* The Constitution (Goa, Daman and Diu) Scheduled Castes Order, 1968.
- \* The Constitution (Goa, Daman and Diu) Scheduled Tribes Order, 1968.
- \* The Constitution (Nagaland) Scheduled Tribes Order, 1970.
- \* The Constitution (Sikkim) Scheduled Caste Order, 1978.
- \* The Constitution (Sikkim) Scheduled Tribes Order, 1978.
- \* The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989.
- \* The Constitution (SC) Orders (Amendment) Act, 1990.
- \* The Constitution (ST) Orders (Amendment) Ordinance Act, 1991.
- \* The Constitution (ST) Orders (Amendment) Ordinance Act, 1996.
- \* The Constitution (Scheduled Castes) Orders (Amendment) Act, 2002.
- \* The Constitution (Scheduled Castes) Orders (Second Amendment) Act, 2002.
- \* The Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002.

2. Applicable in the case of Scheduled Castes/Scheduled Tribes persons who have migrated from one State/Union Territory Administration.

This certificate is issued on the basis of the Scheduled Castes/Scheduled Tribes Certificate issued to Shri /Shrimati\* \_\_\_\_\_ father/mother\* \_\_\_\_\_ of Shri/Shrimati/Kumari \_\_\_\_\_ of Village/Town\* \_\_\_\_\_ in District/Division\* \_\_\_\_\_ of the State/Union Territory\* \_\_\_\_\_ who belongs to the \_\_\_\_\_ Caste\*/Tribe which is recognized as a Scheduled Caste/Scheduled Tribe in the State/Union Territory\* issued by the \_\_\_\_\_ dated \_\_\_\_\_.

3. Shri/Shrimati/Kumari\* and/or\* his/her\* family ordinarily reside(s) in Village/Town\* \_\_\_\_\_ District/Division\* of the State/Union Territory\* of \_\_\_\_\_.

Place \_\_\_\_\_

Date \_\_\_\_\_

Signature  
 Designation  
 (with seal of Office)

State/Union Territory \_\_\_\_\_

Please delete the words, which are not applicable.

@ Please quote specific Presidential Order.

% Delete the Paragraph, which is not applicable.

Note : (a) The term 'ordinarily reside'(s) used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

**The following Officers are authorized to issue caste certificate:-**

1. District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner /Deputy Collector/1\* Class Stipendiary Magistrate/Sub Divisional Magistrate/Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner.
2. Chief Presidency Magistrate /Additional Chief Presidency Magistrate/ Presidency Magistrate.
3. Revenue Officer not below the rank of Tehsildar.
4. Sub-Divisional Officer of the area where the candidate and / or his family normally resides.
5. Certificate issued by Gazetted Officers of the Central or of a State Government countersigned by the District Magistrate concerned.
6. Administrators /Secretary to Administrator (Laccadive, Minicoy and Amindivi Island)



Government of \_\_\_\_\_  
 (Name & Address of the authority issuing the certificate)

INCOME & ASSET CERTIFICATE TO BE PRODUCED BY  
ECONOMICALLY WEAKER SECTIONS (EWS)

Certificate No. \_\_\_\_\_

Dated \_\_\_\_\_

VALID FOR THE YEAR \_\_\_\_\_

This is to certify that Shri/Smt/ Kumari \_\_\_\_\_ Son/daughter/wife  
 of \_\_\_\_\_ permanent residence of \_\_\_\_\_ village/street \_\_\_\_\_ Post  
 office \_\_\_\_\_ District \_\_\_\_\_ in the State/Union Territory \_\_\_\_\_ Pin  
 Code \_\_\_\_\_ Whose photograph is attested below belongs to Economically Weaker Section, since  
 the gross annual income\* of his/her \_\_\_ family\*\* is below Rs.8 Lakh (Rupees Eight Lakh only) for the financial  
 year \_\_\_\_\_. His/her family does not own or possess any of the following assets \*\*\*

- I. 5 acres of agriculture land and above;
- II. Residential flat of 1000 sq. ft. and above ;
- III. Residential plot of 100 sq. yards and above in notified municipalities;
- IV. Residential plot of 200 sq. yards and above in areas other than the notified municipalities.

2. Shri/Smt./Kumari \_\_\_\_\_ belongs to the \_\_\_\_\_ caste which is  
 not recognized as Scheduled caste, Scheduled Tribe and other Backward classes (Central List).

Signature with seal of office \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

Recent passport size  
 attested photograph of  
 the applicant

\*Note 1 : Income covered all sources i.e salary, agriculture, business, profession etc.

\*\*Note 2 : The term 'Family' for this purpose include the person, who seeks benefit of reservation, his/her  
 parents and sibling below the age of 18 years as also his/her spouse and children below the age of 18 years.

\*\*\*Note 3 : The property held by a "Family" in different locations or different places/cities have been clubbed while  
 applying the land or property holding test to determine EWS status.



**FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES  
APPLYING FOR APPOINTMENT TO POSTS UNDER THE GOVERNMENT OF INDIA**

This is to certify that Shri/Smt./Kumari \_\_\_\_\_ Son/Daughter of  
\_\_\_\_\_ of village /Town \_\_\_\_\_ in  
District/Division \_\_\_\_\_ in the State/Union  
Territory \_\_\_\_\_ belongs to the \_\_\_\_\_  
Community which is recognized as a backward class under the Government of India, Ministry of Social Justice and  
Empowerment's Resolution No. \_\_\_\_\_ dated \_\_\_\_\_\*.

2. Shri/Smt./Kumari \_\_\_\_\_ and/or his/her family ordinarily  
reside(s) in the \_\_\_\_\_ District/Division of  
the \_\_\_\_\_ State/Union Territory. This is also to certify that he/she does not belong  
to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India,  
Department of Personnel & Training O.M. No. 36012/22/93- Estt.(SCT) dated 8.9.1993 \*\* (\*\*as amended from time  
to time).

District Magistrate  
Deputy Commissioner etc.

Dated: \_\_\_\_\_

Seal

\*The authority issuing the certificate may have to mention the details of Resolution of Government of India, in which  
the caste of the candidate is mentioned as OBC for central Government services,)

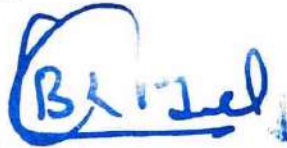
\*\* - As amended from time to time.

Note :- The term "ordinarily" used here will have the same meaning as in Section 20 of the Representation of the  
People Act, 1950.

**DECLARATION BY OBC CANDIDATE REGARDING  
NON-CREAMY LAYER STATUS**

I, \_\_\_\_\_ Son/Daughter \_\_\_\_\_ of  
Shri \_\_\_\_\_ resident of village/town/city \_\_\_\_\_  
District/Division \_\_\_\_\_ State \_\_\_\_\_ hereby declare that I belong to  
\_\_\_\_\_ community which is recognized as a backward class by the Government of India for the purpose  
of reservation in services as per orders contained in DOP&T OM No. 36012/22/93-Estt.(SCT) dated 08.09.93 which  
is modified vide O.M No. 36033/3/2013 Estt(Res) dated 13.09.2017. It is also declared that I do not belong to  
persons/sections (**Creamy Layer**) mentioned in column 3 of the Schedule to the Government of India.

Signature of the applicant  
(OBC Candidate)



**FORM OF CERTIFICATE TO BE SUBMITTED BY THE CANDIDATES TO AVAIL RELAXATION IN HEIGHT & CHEST MEASUREMENT**

Certified that Shri \_\_\_\_\_ S/o Shri \_\_\_\_\_ is a permanent resident of Village \_\_\_\_\_ Post \_\_\_\_\_ Tehsil/Taluka \_\_\_\_\_ District \_\_\_\_\_ of \_\_\_\_\_ State.

2. **It is further certified that :-**

- \* Residents of entire area mentioned below are considered as (Hilly area or schedule Tribes in Hilly area or the case may be as mentioned below) \_\_\_\_\_ for relaxation in height & chest measurement for recruitment in the CAPFs of the Union of India.
- \* He belongs to the races namely (Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas, persons hailing from North Eastern States and the state of Himachal Pradesh, as the case may be as mentioned below) \_\_\_\_\_ Community which is considered for relaxation in height & chest measurement for recruitment in the CAPF of the Union of India.
- \* He belongs to \_\_\_\_\_ Community which is considered for relaxation in height & Chest measurement for recruitment in the CAPF of the Union of India.
- \* Delete whichever is not applicable.

Dated, the \_\_\_\_\_

Place : \_\_\_\_\_

District Magistrate/  
Sub Divisional Magistrate/Tehsildar etc  
(With seal of office)

**Note :- Area wise relaxation in height/chest to the eligible candidates for the post of ASI (Draftsman Grade-III) are as under**

**a) Provision of relaxation in Height for male and female candidates are as under :-**

(i) The Minimum Height of candidates falling in the categories of Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas and candidates belonging to the state of Assam, Himachal Pradesh and Jammu and Kashmir will be **165 CMs for male and 155 CMs for females**. The minimum height for all candidates belonging to Scheduled Tribes will be **162.5 cms for male and 150 cms for female**.

(ii) The minimum height will be 162.5 cms for male and 152.5 cms for females for the candidates hailing from the North Eastern States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and candidates hailing from Gorkha Territorial Administration (GTA) comprising of the three Sub-divisions of Darjeeling district namely Darjeeling, Kalimpong and Kurseong and included the following Monzas Sub division of these Districts :-

- (1) Lohagarh Tea Garden (2) Lohagarh Forest (3) Rangmohan (4) Barachengan (5) Panighata (6) Chota Adapur (7) Paharu (8) Sukna forest (9) Sukna Part-I (10) Pantapati Forest-I (11) Mahandi Forest (12) Champasari Forest (13) Salbarichhat Part-II (14) Sitong Forest (15) Sivoke Hill Forest (16) Sivoke Forest (17) Chhota chenga (18) Nipanai

(iii) The minimum height for all Schedules Tribe candidates hailing from the North Eastern States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and Left Wing Extremist affected districts will be 160 cms for males and 147.5 cms for females.

**b) Provision relaxation in chest for Male candidates is as under**

- (i) The minimum chest for male candidates falling in the categories of Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas and candidates belonging to the state of Assam, Himachal Pradesh and Jammu and Kashmir will be 78 CMs (Minimum 5 CM expansion). The minimum chest for all male candidates belonging to Scheduled Tribes will be 76 cms (Minimum 5 CM expansion).
- (ii) The minimum chest of male candidates hailing from North-Eastern States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Gorkha Territorial Administration (GTA) as mentioned at note (ii) above will be 77 cms unexpanded (with minimum 5 cms expansion)

**FORM OF CERTIFICATE TO BE SUBMITTED BY THE CANDIDATES BELONGING TO HILL TRIBES AND ADIVASI INCLUDING MIZOS AND NAGAS CANDIDATES WHO INTEND TO AVAIL RELAXATION IN HEIGHT MEASUREMENT**

Certified that Shri \_\_\_\_\_ S/o Shri \_\_\_\_\_ is a permanent resident of  
Village \_\_\_\_\_ Post \_\_\_\_\_ Tehsil/Taluka \_\_\_\_\_ District \_\_\_\_\_ of  
\_\_\_\_\_ State.

2. It is further certified that:-

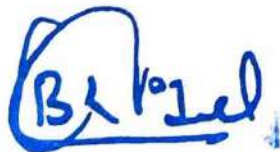
- \* He/she belongs to \_\_\_\_\_ Hill Tribe and Adivasi including Mizo & Nagas Community.
- \* Residents of entire area mentioned above are considered as **Hill tribes/Adivasis/Mizos/Nagas** community.
- \* Delete whichever is not applicable.

District Magistrate/  
Sub Divisional Magistrate/Tehsildar  
(With seal of office)

Dated : \_\_\_\_\_  
Place : \_\_\_\_\_

-----  
(Relaxation in height to the eligible candidates for the post of HC (Plumber), HC (Carpenter)

**Note** :- 165 cms Relaxable by 5 cms for hill Tribes and adivasi including Mizos and Nagas for men.  
Women- 157 cms.



**FORM OF CERTIFICATE TO BE SUBMITTED BY THE CANDIDATES WHO INTEND TO AVAIL RELAXATION IN HEIGHT MEASUREMENT**

Certified that Shri \_\_\_\_\_ S/o Shri \_\_\_\_\_ is a permanent resident of Village \_\_\_\_\_ Post \_\_\_\_\_ Tehsil/Taluka \_\_\_\_\_ District \_\_\_\_\_ of \_\_\_\_\_ State.

2. It is further certified that:-

\* Residents of entire area mentioned below are considered as **Hill tribes/Adhivasis** for relaxation in height measurement for recruitment in the CAPF of the Union of India.

\* He/she belongs to the races namely Garhwali's, Kumaonese, Gorkhas, Dogras, Marathas, Sikkimies, persons hailing from Leh and Ladakh, Kashmir valley, North Eastern States and the State of Himachal Pradesh, which is considered for relaxation in height measurement for recruitment in the CAPF of the Union of India.

\* He/she belongs to \_\_\_\_\_ Hill Tribes/Adhivasis Community which is considered for relaxation in height measurement for recruitment in the CAPFs of the Union of India.

\* Delete whichever is not applicable.

District Magistrate/  
Sub Divisional Magistrate/Tehsildar etc.  
(With seal of office)

Dated : \_\_\_\_\_

Place : \_\_\_\_\_

**Note : Relaxation in height to the eligible candidates for the post of CT (Generator Operator), CT (Generator Mechanic) and CT (Lineman)**

**a) Provision of relaxation in Height for male candidate :- 165 cms.** (The minimum standard so far as it relates to height may be relaxed to **162.5 cms** in respect of persons belonging to the races namely Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas, Sikkimies, persons hailing from Leh and Ladakh, Kashmir valley, North Eastern States and the state of Himachal Pradesh. Also relaxable to **160 cms** in respect of Scheduled Tribes and Adivasi including Mizos and Nagas).

**b) Provision of relaxation in Height for female candidate :- 157 centimeters** (The minimum standard so far as it relates to height may be relaxed to **155 cms** in respect of persons belonging to the races namely Garhwalis, Kumaonese, Gorkhas, Dogras, Marathas, Sikkimies, persons hailing from Leh and Ladakh, Kashmir valley, North Eastern States and the state of Himachal Pradesh. Also relaxable to **150 cms** in respect of Scheduled Tribes and Adivasi including Mizos and Nagas).

FOR OFFICIAL USE ONLY

**RECRUITMENT FOR THE POST OF HC (PLUMBER)/ HC (CARPENTER) /CONSTABLE (GENERATOR OPERATOR) /CONSTABLE (GENERATOR MECHANIC)/ CONSTABLE (LINEMAN) IN BSF ENGG SET UP-2024**

**MEMORANDUM UNFIT**

Subject : **Review Medical Examination of candidates found to be UNFIT in DME for the post of HC(PLUMBER)/ HC(CARPENTER)/CONSTABLE(GENERATOR OPERATOR)/ CONSTABLE(GENERATOR MECHANIC)/CONSTABLE (LINEMAN) IN BSF ENGG SET UP-2024**

Mr./Ms. .... Roll No..... is hereby informed that he/she has been medically examined for recruitment to the post of **HEAD CONSTABLE (Plumber)/ HEAD CONSTABLE (Carpenter)/CONSTABLE(Generator operator)/CONSTABLE(Generator Mechanic)/CONSTABLE (Lineman) in ENGG SET UP-2024** in BSF on \_\_\_\_\_ at \_\_\_\_\_ and found UNFIT due to the reasons mentioned below :-

- (i) .....
- (ii) .....
- (iii) .....
- (iv) .....

2. You are hereby informed that you can apply for Review Medical Examination (RME) by signing on the consent form below. RME will be conducted on ..... for which you are required to report ..... hours.

Signature of Medical Officers  
Name  
Stamp

Date  
Centre

Counter-signature of the Presiding Officer with Seal.

**Result of Medical Examination received**

Name & Signature of the Candidate

**FOR USE OF CANDIDATE ONLY**

To  
**The Presiding Officer of Recruitment Board**  
.....  
.....

Subject – **APPLICATION FOR REVIEW MEDICAL EXAMINATION**

Sir,  
I hereby convey my consent for undergoing Review Medical Examination.

Place.....  
Date.....

Signature.....  
Name.....  
Roll No.....

( ..... )  
Signature of the Presiding Officer with Seal

SYLLABUS FOR THE POST OF HEAD CONSTABLE (PLUMBER)

The trade broadly covers Basic Galvanized pipes Fitting, Cast iron pipes Fitting, PVC Pipe Fitting, SW Pipes Fitting, Water test, Pressure test, Smoke test, Ball test, Taps & Valves Fitting, Cutting/Threading/Bending/G I Pipes, Alkathene flanging/Jointing, Making service connections, Connecting house sewer to main, Fixing Sanitary Fixtures, Installing Water Pump, connecting supply pipe. Keeping in view of above, following syllabus may be considered:-

- (i) Recognize & comply safe working practices, environment regulation and housekeeping.
- (ii) Basic fitting operation-marking, Hacksawing, Chiseling, Filing, Drilling, Taping and Grinding etc. Accuracy :  $\pm$  0.25 mm.
- (iii) Inner & Outer Thread cutting on Metal & Studs and thread cutting on different types of pipes & fittings accessories.
- (iv) Join wood with carpenters? tools
- (v) Cutting Pipes of Different Dia in different angle and joining of pipes by gas welding, soldering and Brazing.
- (vi) Make a Masonry brick wall and RCC casting, Brick wall cutting for concealing pipe line.
- (vii) Cutting and Bending of pipes using Plumbers ?s tools and equipment
- (viii) Join various type of PVC pipe by heat process or Welding.
- (ix) Make complete pipe.
- (x) Line circuit with
- (xi) Different types of joint and fixing Cocks & value on pipeline.
- (xii) Cutting of Different Types of PVC Pipe, joining and laying.
- (xiii) Perform Water analysis test, Water Pressure test and Water distribution system by using Pipeline.
- (xiv) Aligning and laying of humed asbestos pipe line of different dia and fitting & maintenance of drainage pipeline.
- (xv) Installation and maintenance of different Electric pump.
- (xvi) Join fittings for different purposes on PVC pipe line.
- (xvii) Construction of inspection chamber, manhole, gutter, septic tank, socket etc.
- (xviii) Testing for pipe line as per site drainage pipe line layout.
- (xix) Removal of leakage pipe line.
- (xx) Installation, fixing & maintenance of different value & cock.
- (xxi) Installation & maintenance of water meter and water supply for fixture.
- (xxii) Demonstrate bending for different materials & different pipe joint.
- (xxiii) Fitting and maintenance of Fixture at different place.
- (xxiv) Fitting, fixing & laying installation of hot & cold water pipe line and symboling.
- (xv) Repairing & reconditioning of waste pipe line.
- (xvi) Repairing & reconditioning, scraping & painting of sanitary fittings pipe line.



SYLLABUS FOR THE POST OF HC (CARPENTER)

Carpenter, General makes, assembles, alters and repairs wooden structures and articles according to sample or drawing using hand or power tools or both. Studies drawing on sample to understand type of structure or article to be made and calculates quantity of timber required, Selects timber to suit requirements. Marks them to size using square, scribe etc. Saws, chisels and plans wooden pieces to required sizes and makes necessary joints such as half lap, Tenon mortise, dovetail etc. using saws, planes, mortising, chisels, drills and other carpentry hand or power tools as required. Checks parts frequently with square, foot rule, measuring tape etc to ensure correctness. Assembles parts and secures them in position by screwing, nailing or doweling. Checks assembled structure with drawing or sample; rectifies defects, if any, and finishes it to required specifications. Alters, repairs or replaces components in case of old structures or articles in similar manner. May glue parts together. May smoothen and finish surface with sand paper and polish. May fix metal fittings to structure and polish. May fix metal fittings to structure or article made. May calculate cost of furniture. May sharpen his own tools. In view of the above, following syllabus may be considered.

- (i) Identify timber/wood, apply measuring, marking and testing instrument and holding & supporting hand Tools.
- (ii) Identify and apply various saws and portable power saw machines for Ripping, cross cutting, Oblique sawing and curve cutting etc.
- (iii) Analyze the surface finish with exact sizing by planning operation, identifying and applying various shaving tools or portable power planing machine.
- (iv) Identify and apply various paring tools and analyze and choose the positioning and employ holding device for chiseling with better finish.
- (v) Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance.
- (vi) Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware.
- (vii) Analyze and identify various carving tools and convert a wooden block/piece into a decorative article.
- (viii) Demonstrate preservation of wooden item through surface finishing with various processes such as Painting, polishing & varnishing etc.
- (ix) Demonstrate ripping, cross cutting, curve cutting etc. on band saw/circular saw machine and grinding and setting of blade/cutter.
- (x) Demonstrate different operations on jointer/surface planer/Thickness planer machine along with sharpening blades. (Range of Operations- Surfacing, thickening, chamfering, edge ending etc.)
- (xi) Demonstrate working on pedestal grinding (Range of operations-grinding of mushroom head, cutting edge of tools, drills, etc.)
- (xii) Demonstrate working on pedestal/portable drilling machine, use of different types of drill bits, make holes of different sizes in correct location on wood work.
- (xiii) Demonstrate different operations on wood turning lathe along with sharpening of cutting tools.
- (xiv) Demonstrate different operations on Tenon and mortise machine.
- (xv) Demonstrate different operations on sanding MACHINE.
- (xvi) Identify and prepare different types of pattern, core box, core print etc. for moulding application with proper allowances and colour codes.
- (xvii) Produce component involving different operations of fitting work and check for functionality.
- (xviii) Produce component involving different operations of sheet metal work and check for functionality.
- (xix) Prepare various roof truss, door and windows frame, shutters, assembling & fixing (wooden, aluminum & pvc).
- (xx) Paint various door, windows frame, stair and furniture (wooden or aluminum)
- (xxi) Prepare various type of wooden floor, partition wall etc. Check, identify, analyze and repair the wooden job.

SYLLABUS FOR THE POST OF CT (GENERATOR OPERATOR)**Standard and syllabus for technical written exam:**

- a) **General engineering ITI Level:** Basic safety introduction, Personal protection, Basic injury prevention, Basic first aid, Importance of Safety and general Precautions to be observed in the shop. safety signs - for Danger, Warning, caution & personal safety message. Safe handling of Fuel Spillage, Fire extinguishers used for different types of fire. Safe disposal of toxic dust, safe handling and Periodic testing of lifting equipment, Authorization of Moving & road testing vehicles. Energy conservation- Definition, Energy Conservation Opportunities (ECOs)-Minor ECos and Medium ECos, Major ECos), Safety disposal of Used engine oil, Electrical safety tips. Hand & Power Tools:- Marking scheme, Marking material-chalk, Prussian blue. Cleaning tools- Scraper, wire brush, Emery paper, Description, care and use of Surface plates, steel rule, measuring tape, try square. Calipers-inside and outside. Dividers, surface gauges, scribe, punches-prick punch, center punch, pin punch, hollow punch, number and letter punch. Chisel-flat, cross-cut. Hammer- ball pein, lump, mallet. Screw drivers-blade screwdriver, Phillips screw driver, Ratchet screwdriver. Allen key, bench vice & C-clamps, Spanners- ring spanner, open end spanner & the combination spanner, universal adjustable open end spanner. Sockets & accessories, Pliers - Combination pliers, multi grip, long nose, flat-nose, Nippers or pincer pliers, Side cutters, Tin snips, Circlip pliers, external circlips pliers. Air impact wrench, air ratchet, wrenches- Torque wrenches, pipe wrenches, car jet washers Pipe flaring & cutting tool, pullers-Gear and bearing. Systems of measurement, Description, care & use of - Micrometers- Outside and depth micrometer, Micrometer adjustments, Vernier calipers, Telescope gauges, Dial bore gauges, Dial indicators, straightedge, feeler gauge, thread pitch gauge, vacuum gauge, tire pressure gauge. Fasteners- Study of different types of screws, nuts, studs & bolts, locking devices, Such as lock nuts, cotter, split pins, keys, circlips, lock rings, lock washers and locating where they are used. Washers & chemical compounds can be used to help secure these fasteners. Function of Gaskets, Selection of materials for gaskets and packing, oil seals. Cutting tools :- Study of different type of cutting tools like Hacksaw, File- Definition, parts of a file, specification, Grade, shape, different type of cut and uses., OFF-hand grinding with sander, bench and pedestal grinders, safety precautions while grinding.

Limits, Fits & Tolerances:-Definition of limits, fits & tolerances with examples used in auto components Basic electricity, Electricity principles, Ground connections, Ohm's law, Voltage, Current, Resistance, Power, Energy. Voltmeter, ammeter, Ohmmeter Multimeter, Conductors & insulators, Wires, Shielding, Length vs. resistance, Resistor ratings Fuses & circuit breakers, Ballast resistor, Stripping wire insulation, cable colour codes and sizes, Resistors in Series circuits , Parallel circuits and Series-parallel circuits, Electrostatic effects, Capacitors and its applications, Capacitors in series and parallel. Introduction to welding and Heat Treatment , Welding processes – Principles of Arc welding, brief description, classification and applications. Manual Metal Arc welding -principles, power sources, electrodes, welding parameters, edge preparation & fit up and welding techniques; Oxy – Acetylene welding - principles, equipment, welding parameters, edge preparation & fit up and welding techniques: Heat Treatment Process– Introduction, Definition of heat treatment, Definition of Annealing, Normalizing, Hardening and tempering. Case hardening, Nitriding, Induction hardening and Flame Hardening process used in auto components with examples. Description of internal & external combustion engines, Classification of IC engines, Principle & working of 2&4-stroke diesel engine (Compression ignition Engine (C.I)), Principle of Spark Ignition Engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine, Direct injection and Indirect injection, Technical terms used in engine, Engine specification.

SYLLABUS FOR THE POST OF CT (GENERATOR MECHANIC)**Standard and syllabus for technical written exam:**

- a) **General engineering ITI Level:** Basic safety introduction, Personal protection, Basic injury prevention, Basic first aid, Importance of Safety and general Precautions to be observed in the shop. safety signs - for Danger, Warning, caution & personal safety message. Safe handling of Fuel Spillage, Fire extinguishers used for different types of fire. Safe disposal of toxic dust, safe handling and Periodic testing of lifting equipment, Authorization of Moving & road testing vehicles. Energy conservation- Definition, Energy Conservation Opportunities (ECOs)-Minor ECos and Medium ECos, Major ECos), Safety disposal of Used engine oil, Electrical safety tips. Hand & Power Tools:- Marking scheme, Marking material-chalk, Prussian blue. Cleaning tools- Scraper, wire brush, Emery paper, Description, care and use of Surface plates, steel rule, measuring tape, try square. Calipers-inside and outside. Dividers, surface gauges, scribe, punches-prick punch, center punch, pin punch, hollow punch, number and letter punch. Chisel-flat, cross-cut. Hammer- ball pein, lump, mallet. Screw drivers-blade screwdriver, Phillips screw driver, Ratchet screwdriver. Allen key, bench vice & C-clamps, Spanners- ring spanner, open end spanner & the combination spanner, universal adjustable open end spanner. Sockets & accessories, Pliers - Combination pliers, multi grip, long nose, flat-nose, Nippers or pincer pliers, Side cutters, Tin snips, Circlip pliers, external circlips pliers. Air impact wrench, air ratchet, wrenches- Torque wrenches, pipe wrenches, car jet washers Pipe flaring & cutting tool, pullers-Gear and bearing. Systems of measurement, Description, care & use of - Micrometers- Outside and depth mirometer, Micrometer adjustments, Vernier calipers, Telescope gauges, Dial bore gauges, Dial indicators, straightedge, feeler gauge, thread pitch gauge, vacuum gauge, tire pressure gauge. Fasteners- Study of different types of screws, nuts, studs & bolts, locking devices, Such as lock nuts, cotter, split pins, keys, circlips, lock rings, lock washers and locating where they are used. Washers & chemical compounds can be used to help secure these fasteners. Function of Gaskets, Selection of materials for gaskets and packing, oil seals. Cutting tools :- Study of different type of cutting tools like Hacksaw, File- Definition, parts of a file, specification, Grade, shape, different type of cut and uses., OFF-hand grinding with sander, bench and pedestal grinders, safety precautions while grinding.

Limits, Fits & Tolerances:-Definition of limits, fits & tolerances with examples used in auto components Basic electricity, Electricity principles, Ground connections, Ohm's law, Voltage, Current, Resistance, Power, Energy. Voltmeter, ammeter, Ohmmeter Multimeter, Conductors & insulators, Wires, Shielding, Description of internal & external combustion engines, Classification of IC engines, Principle & working of 2&4-stroke diesel engine (Compression ignition Engine (C.I)), Principle of Spark Ignition Engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine, Direct injection and Indirect injection, Technical terms used in engine, Engine specification. Study of various gauges/instrument on a dash board of a vehicle- Speedometer, Tachometer, Odometer and Fuel gauge, and Indicators such as gearshift position, Seat belt warning light, Parking-brake-engagement warning light and an Engine-malfunction light. Different type of starting and stopping method of Diesel Engine Procedure for dismantling of diesel engine from a vehicle.. Diesel Engine Components: Description and Constructional feature of Cylinder head, Importance of Cylinder head design, Type of Diesel combustion chambers, Effect on size of Intake & exhaust passages, Head gaskets. Importance of Turbulence Valves & Valve Trains- Description and Function of Engine Valves, different types, materials, Type of valve operating mechanism, Importance of Valve seats, Valve seats inserts in cylinder heads, importance of Valve rotation, Valve stem oil seals, size of Intake valves, Valve trains, Valve- timing diagram, concept of Variable valve timing. Description of Camshafts & drives , Description of Overhead camshaft, importance of Cam lobes, Timing belts & chains, Timing belts & tensioners. Description & functions of different types of pistons, piston rings and piston pins and materials. Used recommended clearances for the rings and its necessity precautions while fitting rings, common troubles and remedy. Compression ratio. Description & function of connecting rod, importance of big- end split obliquely, Materials used for connecting rods big end & main bearings. Shells piston pins and locking methods of piston pins. Overhauling of Description and function of Crank shaft, camshaft, Engine bearings- classification and location - materials used & composition of bearing materials- Shell bearing and their advantages- special bearings material for diesel engine application bearing failure & its causes-care & maintenance. Crank-shaft balancing, Firing order of the engine. Description and function of the fly wheel and vibration damper. Crank case & oil pump, gears timing

mark, Chain sprockets, chain tensioner etc. Function of clutch & coupling units attached to flywheel. Description of Cylinder block, Cylinder block construction, and Different type of Cylinder sleeves (liner). Engine assembly procedure with aid of special tools and gauges used for engine assembling. Introduction to Gas Turbine, Comparison of single and two stage turbine engine, Different between gas turbine and Diesel Engine. Intake & exhaust systems Intake system components Exhaust system components Diesel Fuel Systems Electronic Diesel control Marine & Stationary Engine, Emission Control:- Vehicle emissions, Standards- Euro and Bhart II, III, IV, V Sources of emission, Combustion, Combustion chamber design. Types of emissions.

SYLLABUS FOR THE POST OF CT(LINEMAN)**Standard and syllabus for technical written exam:**

- a) **General engineering (Elect) ITI Level:** Basic safety introduction, Personal protection, Basic injury prevention, Basic first aid, Hazard identification and avoidance, safety signs for Danger, Warning, caution & personal safety message, Use of Fire extinguishers, Visit & observation of sections, Various safety measures involved in the Industry, Elementary first Aid, Concept of Standard Fundamental of electricity, Electron theory- free electron, Fundamental terms, definitions, units & effects of electric Current, Ohm's Law -Simple electrical circuits and problems, Resistors -Law of Resistance, Series and parallel circuits. Kirchoff's Laws and applications, Explanation of switches lamp holders, plugs and sockets. Developments of domestic circuits, Alarm & switches, with individual switches, Two way switch .Security surveillance, Fire alarm, MCB, ELCB, MCCB, Capacitor Resistance-Different Types of resistors used in electrical circuits. Specification of resistance and tolerance, Effect of variation of temperature on resistance, Different methods of measuring value of resistance, D.C. Machines - General concept of Electrical Machines.
- Principle of D.C. generator. Use of Armature, Field Coil, Yoke, and Commutator, slip ring Brushes, Laminated core. Brief description of series, shunt and compound generators. Electric wirings, I.E. rules. Types of wirings both domestic & industrial Specifications for wiring. -Grading of cables and current ratings. Principle of laying out in domestic wiring-testing by Meggar. Voltage drop concept, Wiring system - P.V.C., concealed system. Maintenance & Repairing data sheet preparation, Specifications, standards for conduits & accessories-
- Power Wiring- Control Wiring- Information Communication Entertainment Wiring Basic principle of energy audit. Earthing - Principle of different methods of earthing. Importance of Earthing, Earth Leakage Relay .Alternating Current -Comparison D.C& A.C. , Advantages of A.C. Alternating current & related terms frequency, Instantaneous value, R.M.S. value Average value, Peak factor , form factor. Generation of sine wave, phase and phase difference, Inductive & Capacitive reactance  $X_L$  &  $X_c$ , Impedance ( $Z$ ), power factor (p.f) ; Vector diagram. Active and Reactive power, Simple problems on A.C. circuits, single phase & three-phase system etc. Problems on A.C. circuits. Both series & parallel power consumption P.F. etc. Concept three-phase Star & Delta connection Line voltage & phase voltage, current & power in a 3 ph circuits, with balanced and unbalanced load. Harmonics: causes & effects Working principle of Transformer, classification C.T., P.T. Instrument Single phase and Poly phase. E.M.F. equation, parallel operation of transformer, their connections. Regulation and efficiency, Cooling of transformer, protective devices. Specifications, simple problems on e.m.f. Equation, turn ratio, regulations and efficiency. Special transformers. Transformer - construction cores winding shielding, auxiliary parts breather, conservator buckholtz relay, other protective devices cooling of transformer Electrical Measuring Instruments - Multimeter -Wattmeter- P.F. meter-Intergrading type, Digital Energy meter- megger-Energy meter-Frequency meter-Phase Sequence indicator -Multimeter -Analog and Digital Induction motor - Working principle, Squirrel Cage Induction motor , Slip-ring induction motor- Construction and characteristics, starting and speed control. D.O.L Starter, Star /Delta starter, Autotransformer starter.