



ODISHA STAFF SELECTION COMMISSION
Barrack No.1, Unit – V, Bhubaneswar – 751054

Advt. No.IIE-50/2019-4765/OSSC;

Dt. 31.12.2019

DETAILED ADVERTISEMENT

ADVERTISEMENT FOR RECRUITMENT TO DIFFERENT GROUP-C TECHNICAL POSTS ON CONTRACTUAL BASIS UNDER DIRECTORATE OF PRINTING, STATIONERY & PUBLICATION, ODISHA, CUTTACK, COMMERCE & TRANSPORT (COMMERCE) DEPARTMENT, GOVT.OF ODISHA

(WEBSITE: www.osscc.gov.in)

POST CODE-GPT/153

1. IMPORTANT INSTRUCTIONS:

	Start Date	Closing Date
Online Registration	10.12.2021	11.01.2022
Online Payment of Examination Fees	10.12.2021	11.01.2022
Submission of Online Application Form	10.12.2021	19.01.2022
Mode of apply	Online Mode only through the website www.osscc.gov.in . No Physical copy/Hard copy of the online application form need to be submitted by the applicant.	

IMPORTANT:

- The Candidates who intend to apply should go through the eligibility criteria prescribed for different type of post in the advertisement, before filling up the online application and shall apply only through online mode. No other mode of application shall be entertained by the Commission.
- Candidates must register their valid Email Id & Mobile No while applying for the post through online and keep the same active till completion of the recruitment process to receive message from the Commission regarding this recruitment. The Commission shall not be responsible for any loss/ non receipt of message/information sent on the wrong/invalid e-mail address/ mobile number registered by the candidate in the online registration form.
- No hardcopy of online application/ documents to be sent to the Commission. The applicants are required to furnish the required original certificates/documents as listed at clause-8 of the advertisement at the time of certificate verification.
- PwD candidates have to follow the Advisory Notice published vide No.3453/OSSC dtd.24.10.2019 appended to this advertisement before applying under PwD category.
- In-service contractual candidates claiming benefits under provision of Odisha Group-B & Group-C Posts (contractual appointment) Rules, 2013 will also have to follow the advisory notice published vide No.3658/OSSC dtd.01.11.2019 appended to this advertisement.
- Candidate must have possessed requisite Educational qualification/Apprentice certificate/Trade certificate as indicated against each post in the table below at column No-6(c) and must possess requisite certificate of passing Odia as a language subject in HSC or in the final examination of Class-VII or above from a School/Educational Institution recognised by Govt. of Odisha /Central Government.

- Candidate as per his/her educational qualification is eligible to apply for one type of post only.
- The appointment will be initially on contractual basis carrying a consolidated remunerations as per Odisha Group-C & Group- D posts (Contractual Appointment) Rules, 2013 notified vide G.A. Department Notification No. GAD-SC-Rules-0009-2013-32010/Gen dt. 12.11.2013 and as amended up to date.
- Candidate must not be below 18 Years and must not exceed 32 years of age as on 1st January 2019 to be eligible to apply for the post (refer to Clause-6 of this Advertisement) with usual age relaxation for reserved categories as per relevant rules of Govt. of Odisha in force.
- The applicants other than the category of SC/ST/PwD have to pay a sum of Rs.200/- (Rupees two hundred) only as examination fee through online mode while filling up of the online application form using the Debit Card/Credit Card/UPI or any other method available in the on line application form to apply for the post.
- The candidate must submit correct data/ information in different fields in the online application form basing on which he/she will be allowed to appear the examination in different stages. If at any stage of recruitment or thereafter, it is found that any information furnished by the candidate in his/her online application is false/incorrect or the candidate has suppressed any relevant information or the candidate otherwise does not satisfy the eligibility criteria prescribed for the post, his/her candidature for the examination will be cancelled forthwith and he may be debarred either temporarily or permanently from appearing any further recruitment examination conducted by the Commission.

2. How to apply:

- a. The applicants have to go through the Detailed Advertisement before filling up the online application form.
- b. Aspirants have to apply online using the official website of the Commission www.osscc.gov.in.
- c. All eligible candidates have to register themselves by clicking on “**APPLY ONLINE**” button in the Home page of the Commission’s website www.osscc.gov.in.
- d. Those candidates who are applying for the first time have to register for the post by clicking on “**NEW USER**” button shown on the screen. On submitting the registration form a User Id and Password will be generated.
- e. On clicking “New user” or “Registered User” instruction for filling up the Online Registration/ Re-registration and Application Forms shall appear on the computer screen. These instructions are to be read carefully before proceeding for filling up the Application Form.
- f. Step by step procedure for registration/re-registration can be viewed by clicking on “**Instruction to fill up Online Application Form**”.

3. Pre-requisites for filling up online Application Form

- a) Applicant should possess and maintain an E-mail Id and Mobile Number for accessing the OSSC web-portal and to make online Registration/ Re-registration and Application Form. Candidates should keep those E-mail Id and Mobile Number active to receive all important communication from Commission till publication of the final result of this recruitment examination.
- b) Recent Passport size colour photograph of the Applicant, scanned in “jpg/jpeg” format between ranges of 20 kbs to 100kbs shall be kept handy for uploading during Registration for the post.

- c) Full Specimen signature of the Applicant, scanned in "jpg/jpeg" format between range of 20kbs to 50kbs shall be kept handy for uploading during Registration.
- d) Applicant shall keep their required certificates and Mark sheets and all other documents as per Col.8 of this advertisement ready while filling in the details of the educational qualification during filling of Online Application Form.
- e) **The candidate must upload the scan copy of H.S.C. /10th standard pass certificate & mark sheet, ITI/NTC pass certificate & mark sheet in respective trade, Apprentice certificate, +2 pass certificate mark sheet for the post of DTP Operator, Bachelor Degree pass certificate& mark sheet for the post of Copy holder, Diploma in Pharmacy & mark sheet for the post of Pharmacist and other required certificates & mark sheets for eligibility of the candidate for the particular post he is applying. The scanned document must be in "Pdf" format between ranges of 100kb to 500 kb.**
- f) Candidates claiming reservation/age relaxation under SC/ST/SEBC category need to submit detail information of online Caste Certificate issued by competent Authority in the online application form. But if the valid online Caste Certificate issued by the competent Authority is not in possession with the candidate at the time of submission of the online application form, he/she must give a self-declaration in the format as **"Annexure-A"** appended to the online application form.
- g) Candidates claiming age relaxation/reservation under **"Ex-Serviceman"** category need to upload a scan copy of any one of the Ex-Servicemen Documents i.e. **Discharge Certificate/ Identity card/ PPO (indicating therein the date of entry, date of discharge and period of service rendered in Defence Forces)**. The candidates who will be discharged from the Defence Services within next six month from the last date of registration of this online application form must upload the scan copy of the required certificate from authorised officer indicating there in the details of the date of entry, date of discharge and period of service rendered in Defence Forces. The scanned document must be in "Pdf" format between ranges of 100kb to 500 kb.
- h) Candidates Claiming age relaxation & reservation under **"PwD (Persons with Disabilities)"** category need to upload a valid **PwD** certificate issued by UDID (Unique disability identification). The scanned document must be in "Pdf" format between ranges of 100kb to 500 kb.
- i) In-service contractual employees in Government Offices claiming age relaxation up to 45 years (as on 01.01.2019) as per Govt. in G.A. Department Notification No.GAD-SC-Rules-0061-2013-1147/Gen dtd.17.01.2014 & Notification No.GADSC-Rules-0009-2013/32010/Gen dtd.12.11.2013 and who have completed minimum one year of continuous service prior to commencement of Odisha Group- B/ Group-C& D posts Contractual Appointment Rules, 2013 must possess the required certificate issued by the concerned employer in the proforma prescribed by the Commission vide Advisory Notice No.3568/OSSC dated 01.11.2019 available in the website of the Commission www.osscc.gov.in . They shall have to fill the detail information like Name of the Employer, Scheme of appointment, date of appointment, whether covered under Category-I/Category-II (as per clause-8 of Odisha Group-B/Group-C & D Contractual Appointment Rules-2013), FD Approval/Concurrence No. in the online application form and candidate has to produce the originals during Certificate Verification for consideration of his/her claim under Contractual in-service benefits.

The candidate should ensure that the scanned Photograph and full Specimen Signature, Left/Right Hand Thumb Impression and other relevant documents must



be clearly identifiable/ visible, otherwise the registration and application shall be liable for rejection and no correspondence on this account shall be entertained.

Caution:

The candidate must submit correct data/ information in different fields in the online application form basing on which he/she will be allowed to appear the examination in different stages. If at any stage of recruitment or thereafter, it is found that any information furnished by the candidate in his/her online application is false/incorrect or the candidate has suppressed any relevant information or the candidate otherwise does not satisfy the eligibility criteria prescribed for the post, his/her candidature for the examination will be cancelled forthwith and he may be debarred either temporarily or permanently from appearing any further recruitment examination conducted by the Commission.

4. (a) Vacancies be filled up and reservations:-

Sl. No	Name of the Post/Services	UR (Out of which women)	SEBC (Out of which women)	SC (Out of which women)	ST (Out of which women)	Total (Out of which women)	ESM	Sports	PwD	Remarks on PwD
01	Binder Grade-III	3(w-1)	4(W-1)	Nil	Nil	07(W-2)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
02	Copy Holder	6(W-3)	2(W-0)	Nil	1(W-0)	09(W-3)	Nil	Nil	01 (HI)	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
03	Electrical Mechanic	1(w-0)	Nil	1(W-0)	1(W-0)	3(W-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) & OL shall be eligible to apply for the post.
04	Electrical Mistry	1(w-0)	Nil	Nil	Nil	1(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
05	Offset Machine Assistant	4(w-2)	1(w-0)	Nil	Nil	5(W-2)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) & OL shall be eligible to apply for the post.
06	Process Assistant	1(w-0)	1(w-0)	Nil	Nil	2(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) & OL shall be eligible to apply for the post.
07	Desktop Printing Operator	3(w-1)	Nil	Nil	Nil	3(w-1)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
08	Pharmacist	2(w-0)	Nil	Nil	Nil	2(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid), OL, OA, BL (MNR) shall be eligible to apply for the post.
09	Welder	2(w-0)	Nil	Nil	Nil	2(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid), OL shall be eligible to apply for the post.

10	Carpenter Gr-II	1(w-0)	Nil	Nil	Nil	1(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid), OL shall be eligible to apply for the post.
11	Turner	1(w-0)	Nil	Nil	Nil	1(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
12	Machinist	1(w-0)	Nil	Nil	Nil	1(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
13	Fitter	2(w-0)	Nil	Nil	Nil	2(w-0)	Nil	Nil	Nil	PWD candidates of HI (with suitable aid) shall be eligible to apply for the post.
	Total	28(W-7)	8(W-1)	01(W-0)	02(W-0)	39(W-8)	Nil	Nil	01	

- i. The Candidates as per their qualification shall be eligible to apply for one type of post only.
- ii. PwD candidates in order of merit having permanent disability of 40% or more in the bench mark disability of HI (with suitable aid) shall be eligible to get reservation against the post of Copy holder. PwD candidates having permanent disability of 40% or more in other bench mark categories as mentioned against each post shall be eligible to get age relaxation to apply for the post. The number of vacant posts to be filled up on the basis of this recruitment is subject to change without any prior notice as per discretion of the Commission, the Recruiting Authority and Government.

5. Remuneration & Condition of Service

The appointment will be initially on contractual basis carrying a consolidated remuneration as Odisha Group-C & Group- D posts (Contractual Appointment) Rules, 2013 notified vide G.A. Department Notification No. GAD-SC-Rules-0009-2013-32010/Gen dt. 12.11.2013 and as amended up to date.

6. Eligibility Criteria

(a) Age:

The minimum age for the above posts is 18 years and the maximum age is 32 years as on 01.01.2019. The upper age limit is relaxable by 5 years for candidates belonging to SEBC, SC, ST & all Women candidates, 10 years for candidates belonging to PwD category & the total period of service rendered in defence service in case of Ex-servicemen. PwD candidates in the ST & SC category shall be entitled to **cumulative age relaxation** of ten years over & above the normal age relaxation specified for the category. However, a candidate can only avail one type of age relaxation as per rule in **addition to additional age relaxation for different type of posts as per Apex Court Judgment in AIR 1995 SC1115** as indicated against each post in the table given below. **To be eligible, candidates not enjoying any relaxation of upper age limit must not have been born earlier than 2nd January, 1987 and not later than 1st January 2001.**

Border Security Force, Indian Coast Guard, CRPF and other Para Military Forces are not within the definition of Ex-Servicemen.

Note: There is no post reserved for ex-serviceman category. However, an Ex-SM candidate they can avail age relaxation to apply for the post.

The upper age limit is relaxable for in-service contractual employees engaged in Government offices by the Govt. or through manpower service provider agencies in the State Govt. offices with approval of Finance Dept and have completed at least one year of continuous service prior to commencement of "Odisha Group-B/Group-C & D posts (Contractual appointment) Rules-2013 shall be eligible to apply for the post after availing age relaxation.

As such they must be less than 45 years as on 01.01.2019. They should submit the required proof from their employer for availing the benefits under the rules and submit the required documents as per the advisory notice at **Annexure-B** on the date of certificate verification.

(b) Date of birth entered in the High School Certificate Examination by the Board of Secondary Education, Odisha or equivalent Certificate issued by the recognised Board/Council/by an Indian University as equivalent there to shall only be acceptable to the Commission.

(c) Scale of Pay, Educational Qualification & Additional Age relaxation prescribed for the posts:

SL. No	Name of the Post	Educational Qualification & Experience required	Scale of Pay	Additional Age Relaxation														
01	Binder Grade-III	Must have completed HSC with National Trade certificate/National Apprentice certificate in Binding Trade or its equivalent from School of Printing and allied Trades or similar institutions recognised by NCVT.	Level-3	As per Apex Court judgment (AIR1995, SC1115} Age relaxation of 2 (two) years shall be given to the candidates who have completed Apprentice Training from school of Printing or similar Govt. Registered Institution.														
02	Copy Holder	Must be Bachelor Degree in any discipline. Candidates having National Trade Certificate/National Apprentice Certificate in Printing Trade shall be given preference in form of weight age Mark @5% of the marks secured in Written Examination.	Level-4	As per Apex Court judgment (AIR1995, SC 1115} Age relaxation of apprentice training period in printing Trade as follows shall be given to the candidates who have completed Apprentice Training from Govt. Regd. Institution. <table><tr><th><u>Details of printing</u></th><th><u>Age relaxation</u></th></tr><tr><th><u>Trade</u></th><th><u>Admissible</u></th></tr><tr><td>Book Binding --</td><td>-- 2 years</td></tr><tr><td>Plate Making --</td><td>-- 2 years</td></tr><tr><td>Litho Offset --</td><td>-- 3 years</td></tr><tr><td>Retouching trade --</td><td>-- 3 years</td></tr><tr><td>Composite Trade --</td><td>-- 2years</td></tr></table>	<u>Details of printing</u>	<u>Age relaxation</u>	<u>Trade</u>	<u>Admissible</u>	Book Binding --	-- 2 years	Plate Making --	-- 2 years	Litho Offset --	-- 3 years	Retouching trade --	-- 3 years	Composite Trade --	-- 2years
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Retouching trade --	-- 3 years																	
Composite Trade --	-- 2years																	
03	Electrical Mechanic*	Must have completed H.S.C. with ITI in Electrician Trade. However candidates having Diploma/ Degree in Electrical Engineering shall be given preference in form of weightage marks @5% of the marks secured in Written Examination.	Level-5	As per Apex Court judgment (AIR1995, SC 1115} Age relaxation of 01 (one) year shall be given to the candidates who have completed Apprentice Training in Electrician Trade from Regd. Institution.														
04	Electrical Mistry*	Must have completed H.S.C. with ITI in Electrician Trade. However candidates having Diploma/ Degree in Electrical Engineering shall be given preference in form of weight age mark @5% of the marks secured in Written Examination.	Level-3	As per Apex Court judgment (AIR1995, SC 1115} Age relaxation of 01 (one) year shall be given to the candidates who have completed Apprentice Training in Electrician Trade from Regd. Institution.														

05	Offset Machine Assistant	Must have completed H.S.C. with National Trade Certificate/National Apprentice Certificate in offset Printing / Litho Offset Trade or equivalent Trade from a NCVT Recognised /Registered Institution	Level-4	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 3 (three) years shall be given to the candidates who have completed Apprentice Training in Litho offset Machine Minder Trade from Regd. Institution.
06	Process Assistant	Must have completed H.S.C. with National Trade Certificate/National Apprentice Certificate in Plate Making / Retouching Trade or equivalent Trade from a NCVT Recognised /Registered Institution.	Level-4	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of shall be given to the candidates who have completed Apprentice Training from Regd. Institution in the following trade as follows: 2(two) Years in case of Plate Making Trade & 3(Three) years in case of Retouching Trade.
07	Desktop Printing Operator	Must have passed +2/ Intermediate with National Trade Certificate/National Apprentice Certificate in Offset/Plate Making / Retouching Trade from a NCVT recognised Institution.	Level-7	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of shall be given to the candidates who have completed Apprentice Training from Regd. Institution in the following trade as follows: 2(two) Years in case of Plate Making Trade & 3(Three) years in case of Retouching Trade or Litho Offset Trade.
08	Pharmacist	HSC with Diploma in Pharmacy from a recognised institution	Level-7	No additional age relaxation allowed
09	Welder	Must have passed HSC with ITI in Welder Trade from a recognised Institution.	Level-5	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 1 (one) year shall be given to the candidates who have completed Apprentice Training in Welder Trade from Regd. Institution.
10	Carpenter Gr-II	Must have passed HSC with ITI in Carpenter Trade from a recognised Institution.	Level-3	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 1 (one) year shall be given to the candidates who have completed Apprentice Training in Carpenter Trade from Regd. Institution.
11	Turner	Must have passed HSC with ITI in Turner Trade from a recognised Institution	Level-5	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 1 (one) year shall be given to the candidates who have completed Apprentice Training in Turner Trade from Regd. Institution.
12	Machinist	Must have passed HSC with ITI in Machinist Trade from a recognised Institution.	Level-5	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 1 (one) year shall be given to the candidates who have completed Apprentice Training in Machinist Trade from Regd. Institution.
13	Fitter	Must have passed HSC with ITI in Fitter Trade from a recognised Institution.	Level-5	As per Apex Court judgment (AIR1995, SC 1115) Age relaxation of 1 (one) year shall be given to the candidates who have completed Apprentice Training in Fitter Trade from Regd. Institution.

Note:

- The Institution from which the candidate has obtained apprentice training certificate must be registered under MSME Department or CT & GST Department etc.
- The candidate must have the requisite qualification and must have possessed the required trade (NTC/NAC) certificate on the last date of submission of online application.

- ***There will be a common examination for Electrical Mechanic & Electrical Mistry as per syllabus appended to this advertisement at annexure-C. Candidates securing higher position in the merit list category wise shall be selected for Electrical Mechanic.**

(d) Beside the above qualification, the applicant must have Odia as one of the subjects in the HSC or passed examination in Odia equivalent to M.E. standard or passed in Odia as language subject in final examination of Class-VII or passed a test in Odia in M.E. School Standard conducted by Education Department Govt. of Odisha on the date of the Application.

(e) General Eligibility Criteria

In order to be eligible for appearing in the examination a candidate must satisfy the following conditions.

- The candidate must be a citizen of India.
- Be able to speak, read & write Odia.
- Be of good moral character & conduct.
- Be of good mental condition and bodily health and free from any physical defect likely to interfere with the discharge of his duties in the service.
- If married, must not have more than one spouse living.

Not fulfilling any of the eligibility criteria shall render the applicant's candidature invalid & rejected.

7. Examination Fee:

- The candidates other than SC, ST category shall have to pay a non-refundable examination fee of Rs.200/-(Rupees Two Hundred Only). The fees can be deposited through online mode using Internet Banking/ Debit Card/Credit card/UPI or any other available payment methods linked with the online application form. The candidates should keep with them a copy of the payment slip showing successful transaction of the fees for future reference.
- Applications without payment of examination fee (except SC/ST category candidates) will be taken as incomplete and shall be liable for rejection.

8. Certificates / documents to be submitted at the time of certificate verification:-

The documents as listed below are to be submitted in originals along with a set of self-attested photocopies during certificate verification.

- Copy of the online application form.
- HSC pass certificate & mark sheet issued by the recognised Board/Council.
- +2 Pass certificate & mark sheet for the post of DTP operator.
- Bachelor Degree certificate & mark sheet for the post of copy holder.
- ITI /NTC/Diploma/Degree in pass certificate & Mark sheets in respective trade.
- Trade Apprentice Certificate in respective Trade.
- Candidates of SC/ST/SEBC category shall submit the valid online caste certificate issued by competent authority.
- Candidates have to submit a certificate either of passing HSC examination with Odia as a compulsory subject, or in lieu thereof a certificate of passing a language test in Odia of M.E. standard/Class-VII issued by Principal/Head Master or any other competent authority.
- Candidates Claiming age relaxation & reservation under "PwD (Persons with Disabilities)" category need to submit a self attested valid PwD certificate issued by UDID (Unique disability identification).

- (x) Documents in support of claim against Ex-servicemen i.e. Discharge certificate, identity Card & P.P.O issued by the appropriate Authority. The Ex-servicemen certificate to be produced must be indicating the Date of Entry, Date of Discharge & Period of Service rendered in Defence forces.
- (xi) In-Service contractual employees claiming age relaxation and contractual In-service benefits must submit a Certificate from employer as per proforma prescribed by the Commission vide the **Advisory Notice No.3568/OSSC dated 01.11.2019** available in the website of the Commission "www.osscc.gov.in" along with the copy of appointment order indicating there in the scheme of appointment etc.

9. Scrutiny of Applications

There shall be the scrutiny of application of the candidates in different Trade basing on the documents uploaded by the candidates in the online application form. Candidates found eligible for different Trade as per their documents uploaded shall be allowed to appear the Main written Examination. The list of in-eligible candidates shall be notified by the Commission with defects there in the website of the Commission. The Trade, Apprentice and other relevant documents as regards to Technical qualification shall be verified by the Technical Officer deputed by Directorate of Printing, Stationery & publication, Odisha.

10. (a) Plan and pattern of examination:-

The recruitment shall be as per following Plan and syllabus. The written examination shall be of objective type with multiple choices of answers to be answered in OMR sheet. The Commission at their discretion may conduct the written examination through CBRE mode.

Stages/ Exam type	paper	No. of question	Marks	Time Duration	Remarks
Stage-I written Examination	One Paper CBRE or OMR based Test	100 Questions (objective type with multiple choices of answers)	100 marks (No negative marking for wrong answer)	1 & ½ hours	1. Part-A- 50 questions shall be from concerned ITI Trade/ Printing Trade/ other subjects/trade as per the educational qualification indicated against each post. Part-B- 50 questions shall be from English, Odia and General Awareness. The Nos. of question shall be as follows: - General English-10 Nos , Odia-10 Nos. and General Awareness & Current events with special reference to Odisha-30nos. (The questions in the part -B shall be of Class-IX standard)
Stage-II Professional Trade Test (Practical)	Candidates numbering up to 3(three) times of the vacancies from each category in each Trade in order of merit basing on the marks secured in the written examination shall be shortlisted for Stage-II i.e, Professional Trade Test (Practical). Total Mark: 50 marks Minimum qualifying marks is 15 Marks. The candidates have to appear the practical Test & oral test as per course indicated in the Syllabus attached at Annexure-C.				
Stage-III Certificate verification	The candidates who qualify in the Trade Test shall be called for verification of original certificates, Mark sheet, Apprentice certificate, Trade Experience certificate etc as detailed at Clause No-6(c) of this advertisement, required for eligibility for the posts. The merit List shall be prepared Trade wise from among the candidates who found suitable in certificate verification.				

Note: There will be a common examination for Electrical Mechanic & Electrical Mistry basing on the syllabus appended to this advertisement. Candidates securing higher position in the merit list category wise shall be selected for Electrical Mechanic.

(b) The candidature of the candidate shall be rejected if he/she remains absent in any of the above stages of recruitment and shall not be allowed to appear in the subsequent stages of Examination in this recruitment.

(c) **Syllabus of Examination:-**The detail syllabus of the Technical part of the written examination and Trade Test is annexed as **Annexure-C** to this Advertisement.

11. PLACE AND DATE OF WRITTEN EXAMINATION& TRADE TEST:

The Date/Time/ Venue of the Written Examination will be informed to the eligible candidates in their Admission Letters, in due course. The admission letters shall only be downloaded by the eligible candidates by accessing the Commission's website by using their 'User ID' and 'Password' from a date to be notified later on.

12. Admission letter:

Admission Letters for the written examination will be made available to the eligible candidates in the official website of the commission one week prior to the date of the examination carrying the scan photograph and scan signature of the eligible/qualified candidate and signature of the Secretary of the Commission. This will carry intimation about the date, time and venue of the written examination. Each eligible candidates shall have to download their admit card/admission letter well before the date of the examination by logging in to the official website of the Commission "www.osscc.gov.in" 'User ID' and 'Password'. The date(s)/Time/Venue of the examination will be notified in local dailies (newspapers) and in the Commission's website for information of the candidates. Further, the Alert message regarding the date of examination will be sent to the eligible candidates in his/her registered Mobile No. mentioned by the applicant in the online Application form prior to one month of the examination. No Admission letter will be send through post.

13. Select list:

Select list shall be prepared Trade wise in order of merit category wise basing on the sum total of marks secured by the candidates in the Written Examination and Trade Test (Practical) from among the candidates found suitable in the certificate verification.

Note:

- i. The Examination shall be conducted through Computer Based Recruitment Examination (CBRE) mode. In case Examination is conducted through OMR sheets, Blue/Black ball point pen only should be used for answering (ovalling) in OMR Sheet. Whiteners/Erasers should not be used on the OMR Sheet. The candidates are required to visit the website of the Commission 'www.osscc.gov.in' for detail information about the programme of the examination etc., notice regarding rejection of the application, other important notices etc. and also keep track of publication of various notices of this recruitment to be published in the leading local daily newspapers.
- ii. The candidate should furnish correct Mobile Number and e-Mail Id for sending SMS and other relevant information relating to this recruitment. The Mobile No. & e-Mail Id should remain active till completion of the recruitment process to avoid any communication gap.

WARNING

- Mobile phone or any other electronics devices are strictly prohibited in the premises of the examination centre. The candidates are advised not to bring any such banned items to the examination centre. Any infringement of these instructions might entail debarment of the concerned candidate from the examination.
- Commission reserves the right to conduct Computer Based Recruitment Examination through CBRE mode or OMR based for this recruitment if desires.

By order of the Commission


Secretary

ANNEXURE-'B'

ODISHA STAFF SELECTION COMMISSION, UNIT-V, BHUBANESWAR.

Email: orissassc@gmail.com, Tel.0674-2392833, FAX-2396011

No.IIE-122 /2019 - 3568 /OSSC.,

Date:- 01.11.19

Advisory Notice to candidates claiming benefits available to in-service contractual employees under the In-service contractual appointment Rules while applying for different posts and services of Odisha Staff Selection Commission.

Pursuant to Rule-3,4,5 & 8 of Odisha Group-'C' & 'D' Posts (Contractual Appointment) Rules-2013 published vide G.A. & P.G. Department Notification No.32010/Gen dtd.12.11.2013, and Rule-3,4,5 & 8 of Odisha Group-'B' posts(Contractual Appointment) Rules-2013 published vide G.A. & P.G. Department Notification No.1147/Gen dtd.17.01.2014, it is notified that candidates while applying for different State cadre Posts and Services under Odisha Staff Selection Commission and claiming benefits available to in-service contractual employees under the above mentioned Rules are required to upload a certificate from the Employer/Appointing Authority in the format as prescribed in Annexure-'A' to this Notice.

No certificate other than in the prescribed format shall be accepted by the Commission and will lead to forfeiture of the claim of the candidate to avail the benefits under the above said Rules.

By order of Commission.


Secretary 11.11.19



Annexure-A.

Format of certificate to be submitted by Contractual Employees under different offices of Government of Odisha claiming benefits under Contractual Appointment Rules-2013.

1. Certified that Ms/Mrs./Shri/Mr _____ S/O. _____ resident At _____ Po _____ PS _____, Dist _____ Date of Birth _____ has been engaged in this Office as _____ (post held) in Group-'B'/Group-'C' post on contractual basis from _____ to _____ as per this office Order No. _____ dtd. _____. (Copy enclosed) and has completed total _____ year of continuous service.

2. It is further certified that Mr./Ms/Mrs./Shri _____ has been engaged against the contractual posts created with concurrence of Finance Department vide their Order No./UOR No. _____ dtd. _____ without following the recruitment procedure including ORV Act-1975.

OR

It is certified that the engagement of Mr./Ms/Mrs./Shri _____ is through Man power Service Provider Agencies i.e. _____ with concurrence of Finance Department vide their Order No. _____ dtd. _____/UOR No. _____ dtd. _____

3. It is further certified that Mr./Ms/Mrs./Shri _____ has been engaged as _____ (Post held), prior to commencement of Odisha Contractual Appointment Rules, 2013 and he/she has not been engaged under Temporary Plan Scheme/Temporary Establishment/Tenure Based post in this office.

Signature of Appointing Authority/Employer
With seal

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SYLLABUS RELATING TO DIFFERENT POSTS VIDES

ADVERTISEMENT NO. 4765/OSSC DT.31-12-2019.

1. Binder Grade-III

Written Test Syllabus

1. Brief history of printing; comparative analysis of different printing processes.
2. Outline of the development of the structure of the book and of book binding methods.
3. Materials used in binding industry—Paper, boards, book cloth, leather etc.
4. Paper—Standard sizes, divisions and subdivisions; kinds and qualities handling and care of printed and up printed sheets of paper.
5. Machinery and equipment used in binding—perforating ruling and guillotine machine; their mechanical and operational features handling and care.
6. Folding, standard folding schemes up to 16 pages; knowledge of imposition of simple imposing schemes up to 16 pages; folding sub-division.
7. Gathering and collating; Signatures—Their use
8. Stitching and sewing; hand and machine methods.
9. End paper; kinds, purpose.
10. Forwarding; sequence of operations.
11. Rounding and backing; Case making by hand; tools required handling and care.
12. Safety—Hazards in a binding shop—Preventive measures.
13. Outline of binding and finishing styles; Letterpress binding; stationery binding, Library binding etc.
14. Materials used in binding industry; their handling and storage ISI specifications applicable to binding industry.
15. Machinery and equipment used in binding industry—Guillotine folding, ruling etc. mechanical and operational features, handling care and maintenance.
16. Ruling—Ruling machines—Punching, Disc ruling, kinds, Ruling for various kinds of work.
17. Folding—Folding machines, various folding schemes, factors governing the scheme.
18. Gathering and collating; kinds of machinery in use, mechanical and operational features.
19. Stitching and sewing; machinery equipment and materials used; stitching wire thread etc specifications.
20. Rounding, backing, forwarding case making and casing in materials used and their handling.
21. Edge decoration, marbling, blind and gold, tooling, blocking materials used and their handling.

22. Unsown binding, leather, vellum, block cloth binding; spiral binding—Equipment and materials used; styles of binding for different classes of work – Factors governing selection of style; Plastics; use in binding industry.
23. Humidity and its measurement; its effects on paper and binding materials.
24. Paper and board; hand made and machine made; kinds; weights; GSM system; selection and use; handling and storage of printed and unprinted stock; static electricity and its effect on paper.
25. Book Binding materials; elastic properties; flexibility; suitability and selection.
26. Adhesives; kinds, properties; effects upon materials used.
27. Fungus; insect pests; causes and control.
28. Modern developments—electronic devices used in binding industry.
29. Calculation; warehouse work; requirements of paper and binding materials, output.
30. Daily routine, docket and output records; maintenance
31. Planning and arrangement of a binding section.
32. Safety—Hazards; preventive methods.

Professional Trade Test(Practical) :

Practical Binding operation viz. Jogging, Folding, gathering, stitching, hand sewing, hand numbering and final cutting etc.

2. Copy Holder

Written Test Syllabus

The general English and grammar of HSC standard prescribed by Board of Secondary Education, Odisha comprising of comprehension of given passage, vocabulary and usage, flair for grammar and compositions is applicable.

Professional Skill Test :

- Test in English reading
- Knowledge of proof reading marks.
- Spelling test etc.

3. Electrical Mechanic :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Electrician Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

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Professional Trade Test (Practical) :

Repairing and rectification of electrical electronics defects of Printing and Allied Machines, General Electrical maintenance viz. trouble shooting of building wiring, power switch board, fan, light etc. Motor winding, fan winding etc.

4. Electrical Mistry :**Written Test Syllabus**

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Electrician Trade is applicable. (Available in the website-www.dgt.govt.in/cts)

Professional Trade Test(Practical) :

Repairing and rectification of electrical electronics defects of Printing and Allied Machines, General Electrical maintenance viz. trouble shooting of building wiring, power switch board, fan, light etc. Motor winding, fan winding etc.

5. Offset Machine Assistant :**Written Test Syllabus**

1. Brief History of printing; comparative analysis of different printing processes.
2. Printing surfaces-Outline of preparation for all processes.
3. Lithographic Plates and Printing machinery-Outline of history and development.
4. Photomechanical process; classification; equipment and material used for plate making and offset printing.
5. Plates-Metals used, aluminum, zinc and copper; properties, their handling, care and use; Pre-sensitized plates.
6. Lining up table; layout sheets-Handling and use.
7. Plate Graining-Equipment and materials used-Quality of the grain.
8. Plate making-Surface and deep-etch plates; Outline of chemical and solutions used for plate making; coating of plate for light sensitivity use of whirler.
9. Light source-Kinds; exposure-Printing-down-frame-Use.
10. Measuring gauges; hydrometer, hygrometer, densitometer, etc their handling, care and use.
11. Proof and transfer presses-Kinds; Mechanical and operational features; hand transferring of images.
12. Printing machines for litho, offset printing-Kinds; Mechanical and operational features; Inking and dampening systems.
13. Simple Imposing schemes with relation to folding schemes.

14. Rollers-Kinds; setting, cleaning, handling and storage, Nap roller - preparation and treatment.
15. Paper-Standard sizes; division and subdivision; kinds qualities.
16. Ink-Kinds; qualities.
17. General care and maintenance of plate-making and Litho-offset printing machinery and equipment.
18. Safety-Hazards in plate making and machine rooms-preventive measures.
19. Proofing-press and printing machinery used for Litho Offset printing; Single and multi-colour units; sheet-fed and web-fed; mechanical and operational feature.
20. Cylinders—Plate cylinders, Blanket cylinder and impression cylinder; adjustments.
21. Plates for surface and deep-etch processes—multi-metal plates, Anodized Plates; Pre-sensitized Plates; their preparation, properties and use; handling and stores; corrections—additions and deletions.
22. Chemicals and solutions used in the printing machine room; their preparation, handling care and storage; their properties and uses.
23. Offset Blanket properties; selection, care, handling and storage.
24. Rollers—Inking and dampening; kind, covering materials used for dampeners; properties; handling, washing, care and storage.
25. Automatic feeders—Kinds; mechanical and operational features; setting and operation.
26. Set-off causes and remedies; Anti set-off (Spray) equipment; kinds and use.
27. Delivery systems—Kinds; comparative analysis.
28. Wash-up, washing of rollers by hand and mechanical methods.
29. Machine operation; running problems; causes and remedies; Register, Quality control; multi-colour printing—Sequence of printing of colours.
30. Imposition schemes—General and with relation to folding machines—Simple and Complex schemes up to 32 pages.
31. PH—Definition; effects on Fountain Solution; treatment and control.
32. Temperature and Relative Humidity—Effects on plates and paper; control; Air conditioning—Advantages.
33. Halftone—Theory of halftone; Dot formation—Control of size of dots; screens—Kinds and use.
34. Paper—Brief outline of manufacture—Raw materials used; classification; properties; Selection of paper for printing—Governing factors; machine direction and its Static electricity—its effects and neutralization Handling and storage of printed and unprinted stock.

35. Ink—Brief outline of manufacture—Raw materials used classification properties; selection of ink for printing governing factors Driers reducers; Kinds and uses importance.
36. Colour—Principles of colour; Additive and subtractive theories Mixing and matching of colours.
37. Lubricates—Lubrication systems used on printing machines; kinds and methods.
38. Drive—Methods of transmission of power.
39. Miscellaneous work on printing machines—Bronzing, varnishing, metal printing, etc.
40. Safety—Hazards; preventive measures.
41. General care and maintenance of printing machines and other equipment in a machines-room; cleaning, lubrication and overhauling.
42. Daily routine; docket and output records; maintenance.
43. Calculations—Consumption of paper, ink; wastage; speed; output.
44. Planning and arrangement of a machine-room.
45. Modern developments in litho-offset printing machinery; Brief outline of development in printing machinery of other process.

Professional Trade Test(Practical) :

Roller setting both ink & damper, Paper feeding, Multi Colour Printing trial and printing out put both in Sheet fed and Web Offset Machine.

6. Process Assistant :

Written Test Syllabus

1. Brief History of printing; comparative analysis of different printing processes.
2. Printing surfaces—Outline of preparation for all processes
3. Lithographic Plates and printing machinery—Outline of history and development.
4. Photomechanical process; classification; equipment and material used for plate making and offset printing.
5. Plates—Metals used, aluminum, zinc and copper; properties, their handling, care and use; Pre-sensitized plates.
6. Lining up table; layout sheets—Handling and use.
7. Plate graining—Equipment and materials used—Quality of the grain.
8. Plate making—Surface and deep-etch plates; Outline of chemic and solutions used for plate making; coating of plate for light sensitivity use of whirler.
9. Light source—Kinds, exposure—Printing down frame – Use
10. Measuring gauges; hydrometer, hygrometer, densitometer etc their handling, care and use.

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11. Proof and transfer presses—Kinds; Mechanical and operational features; hand transferring of images.
12. Printing machines for litho, offset printing—Kinds; Mechanical and operational features; Inking and dampening systems.
13. Simple imposing schemes with relation to folding schemes
14. Rollers—Kinds; setting, cleaning, handling and storage, Nap roller—preparation and treatment.
15. Paper—Standard sizes; division and subdivision; kinds qualities.
16. Ink—Kinds; quantities
17. General care and maintenance of plate making and Litho Offset Printing Machinery and equipment.
18. Safety—Hazards in plate making and machine rooms—preventive measures.
19. Films, negatives and positives—Qualities required for making good plates.
20. Plates for surface and deep-etch processes; Multi-metal plates; Pre-sensitized plates—their properties; preparation; comparative analysis and use.
21. Chemicals, Colloids and salts used for plate making—Their reactions on metal plates—Preparation of solutions—Handling care and storage.
22. Graining of plates—Quality of grain, Governing factors for selection; equipment and materials used for graining—Factor controlling the quality of grain; washing of old plates.
23. Light sources; kinds; comparative study; intensity of light—Handling, care and control, Exposure—Factors governing the time exposure and intensity of light.
24. Plate making—Coating of plates; chemicals and solutions used speed of rotation; effects of variation in coating, printing down; Register marks, step-wedges; their purpose and use; Corrections—Additions and deletions—chemicals and tools used; defects in plates—Cause and remedies, handling care and storage of plates; quality control.
25. Halftone—Theory of halftone; Dot formation—Control of size of dots; screens—Kinds and use.
26. Colour—Principles of colour; Additive and subtractive theories; colour; separation; use of filters.
27. Imposing schemes—General and with relation to folding machines ; Simple and complex scheme up to 32 pages.
28. Duplication of images by mechanical means—Step and repeat machine; kinds; manual and automatic.
29. PH value—Effects on plate making process—Treatment and control
30. Temperature and relative humidity—effects on plates—control; Air conditioning—Advantages.
31. Modern developments in plate making—electronic devices for plate making viz: Computer-to-Plate (CtP Machine).
32. Calculations—consumptions of chemicals and other materials; output, etc.

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33. Daily routine—Docket and output records; maintenance.
34. Planning and arrangement of a plate making section.
35. General care and maintenance of machinery, equipment and other materials of a plate making section.
36. Safety Hazards; preventive section.

Professional Trade Test(Practical) :

Preparation of layout, imposition and complete offset plate making either in CtP or in conventional process.

CtP:- Preparation of layout in CtP software as per requirement, exposing of plate in CtP machine, developing and finishing in the processor with required adjustment in the auto processor.

Conventional :- Preparation of layout and imposition as per requirement, exposing in plate exposing machine, preparation of developing chemicals, Developing and finishing the plates.

7. Desktop Printing Operator:

Written Test Syllabus

FUNDAMENTALS :

- Introduction to computers, Hardware & Software.
- Computer applications.
- Input devices : Keyboard, Mouse OCR, OMR, MICR, Digitizer, Scanner etc.
- Storage Media- Magnetic Disk, Hard Disk, Floppy Disk, CD, etc.
- Output Devices: Hard copy devices & Soft copy devices

Types of Software:

- System & Application Software

Concepts:

- Bits, Bytes, RAM, ROM, ASCII etc.

OPERATING SYSTEMS:

DOS:

- Introduction & version
- Familiarization with various commands/tools.

MS Windows:

- Introduction & Version
- Desk Top & its terminology
- Setup using Control Panel
- Windows Accessories
- File management / Folder concept

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Networking Concept:

- LAN, MAN, WAN
- File & Printer Sharing
- Introduction & Use of Internet

DOCUMENT SETUP

Conceptualization of Document

Desk Top Publishing:

- Introduction
- Merit and demerit
- Comparative analysis between DTP and traditional composing processes.
- Costing, estimating of DTP Unit.
- Word Processing through MS-Word

Typography:

- Types (Fonts), Type size, different families.
- Point system and other system of measuring.
- Coasting off; typography, proof reading, familiarization with symbols/proof reading marks used in marking copy/typescript for press.
- Determining line measure and page depth and margin, House styles.
- Page composing through Page Maker.

Composing Process:

- Introduction of various methods of composing.
- Different composing processes and their development. Suitability for job merits and demerits.
- Brief description of different composing machines.
- Output Devices : Inkjet printer, Laser printer, Image setters, computer to plate, computer to printing machine, Light sensitive materials used in output devices i.e. Film/Bromide types of films used in image setter.
Page, composing through Quark Express.

Digital Printing:

- Type of digital printing.
- Uses in commercial operations.
- Inkjet/bubble jet / thermal printer / laser printer used for small and big formats.
- Page composing through Regional Language Software.

DOCUMENT DESIGNING & ADVANCE FEATURES**Graphic reproduction:**

- Tonal value, Tonal gradation.
- Continuous tone, Half tone, Moiré pattern.
- Highlight, Middle Tone Shadow areas, contrast & details.

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Scanning:

- Principle of scanning.
- Types of scanners (Flatbed & Drum) and its use.
- Printing through Photo editing Software.
- Preparation of OCR.

Graphic Design:

- Principle of page design.
- Elements of design.
- Colour- Define colour, type of colours, impact of colours, colour wheel, achieving of different colours through appropriate colour percentage. Selection of types (Fonts) for text/ display work.
- Preparation of Graphics
- Creation of rough sketches.
- Colour Selections.
- Font & Image selection.

Page make-up:

- Principles of page make-up of Books.
- Board Room/Seminar Presentation material preparations.
- Copy preparation and copy fitting procedures.
- Imposition schemes.

Printing:

- Various Types of Printers and their uses.
- Merit & Demerits.
- File format supported for printing, Familiar with various file format i.e., EPS, PDF, etc.
- Using ICC based colour management.

Common Topics for all Printing Trades Apprentices :

- History of printing.
- Introduction.
- Types of printing.
- Comparative Analysis.
- Paper-Standard sizes; division and subdivision; kinds qualities.
- Ink-Kinds; qualities.
- Imposition schemes—General and with relation to folding machines—Simple and Complex schemes up to 32 pages.
- Colour—Principles of colour; Additive and subtractive theories Mixing and matching of colours.

Professional Trade Test (Practical) :

MS Office, PageMaker, Photoshop, CorelDraw and internet browsing, use of scanner, printer.

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Skill Test in typing: English (corrected) 40 w.p.m. minimum speed.
Odia (corrected) 20 w.p.m. minimum speed.

8. Pharmacist :

Written Test Syllabus

The Syllabus prescribed by the Pharmacy council of India for D-Pharm Course is applicable.(Available in <http://www.pci.nic.in/website>).

Professional Trade Test(Practical) :

On First-Aid and knowledge of different medicines. General idea about common diseases, record maintenance, OPD Dispensing, Practical test in Intravenous (IV) & Intramuscular Injection, Saline administration, Minor surgical procedure.

9. Welder :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Welder Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

Professional Trade Test(Practical) :

Marking and cutting of jobs, edge/joint preparation, surface grinding, different types of welding, gas cutting etc.

10. Carpenter Gr. II :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Carpenter Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

Professional Trade Test(Practical) :

Fabrication and repairing of wooden/PVC structure like door, window, table, chairs, wooden board, cup board, almirah, shutter, aluminum sliding channel, furniture etc. Polishing, colouring of finished items.

11. Turner :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Turner Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

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Professional Trade Test(Practical) :

Repairing of printing and allied machines spare parts. Operation of lathe machine, preparation of different machines spare parts/jobs using plane turning, taper turning, thread cutting, boring, riming, knurling etc.

12. Machinist :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Machinist Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

Professional Trade Test (Practical) :

Operation of lathe, shaper, drilling machine, knife sharpening machine & preparation of different types of spare parts meant for printing and allied machines.

13. Fitter :

Written Test Syllabus

The Syllabus prescribed by the Director General of Training, New Delhi for ITI Fitter Trade is applicable.(Available in the website-www.dgt.govt.in/cts)

Professional Trade Test (Practical) :

Trouble set righting and repairing of various types of printing and allied machines relating to mechanical defects. Marking and cutting of different types of angles, flats and rods meant for preparation of structure, operation of different kind of machines of Mechanical Workshop.



Syllabus for the trade of

ELECTRICIAN

UNDER

CTS/ATS

REVISED IN 2006

Govt. of India
Ministry of Labour/DGE&T
Central Staff Training & Research Institute
EN Block, Sector V, Salt Lake
Kolkata-91

**SYLLABUS FOR THE TRADE OF ELECTRICIAN UNDER CTS -- DURATION
2 YEARS (Prescribed by DGE&T)**

Week No.	Trade Theory
1	2
1	Various safety measures involved in the Industry. Elementary first Aid. Concept of Standard.
2	Identification of Trade-Hand tools-Specifications.
3 & 4	Fundamental of electricity. Electron theory- free electron. Fundamental terms, definitions, units & effects of electric current.
5	Solders, flux and soldering technique. Resistors types of resistors & properties of resistors.
6	Explanation, Definition and properties of conductors, insulators and semi-conductors. Voltage grading of different types of Insulators, Temp. Rise permissible Types of wires & cables standard wire gauge Specification of wires & Cables- insulation & voltage grades -Low , medium & high voltage Precautions in using various types of cables
7	Ohm's Law - Simple electrical circuits and problems. Resistors -Law of Resistance. Series and parallel circuits. Kirchoff's Laws and applications. Wheatstone bridge principle and its applications .
8.	Common Electrical Accessories, their specifications-Explanation of switches lamp holders, plugs and sockets. Developments of domestic ckts, Alarm & switches, lamp, fan with individual switches, Two way switch .
9	Chemical effect of electric current-Principle of electrolysis. Faraday's Law of electrolysis. Basic principles of Electro-plating and Electro chemical equivalents. Explanation of Anodes and cathodes. Lead acid cell-description, methods of charging-Precautions to be taken & testing equipment, Ni-cadmium & Lithium cell, Cathodic protection. Electroplating, Anodising.
10	Rechargeable dry cell, description advantages and disadvantages. Care and maintenance of cells Grouping of cells of specified voltage & current, Sealed Maintenance free Batteries, Solar cell.
11	Lead Acid cell, general defects & remedies. Nickel Alkali Cell-description charging. Power & capacity of cells. Efficiency of cells.
12	Magnetism - classification of magnets, methods of magnetising, magnetic materials. Properties, care & maintenance, methods of magnetising magnetic materials. Para & Diamagnetism and Ferro magnetic materials. Principle of electro-magnetism, Maxwell's corkscrew rule, Fleming's left & right hand rules, Magnetic field of current carrying conductors, loop & solenoid. MMF , Flux density, reluctance. B.H. curve, Hysteresis, Eddy current. Principle of electro- magnetic Induction, Faraday's Law, Lenz's Law. Electrostatics - Capacitor- Different types, functions & uses.

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13	Resistance - Different Types of resistors used in electrical ckts. Specification of resistance and tolerance. Effect of variation of temperature on resistance. Different methods of measuring the values of resistance.
14	Working principles and circuits of common domestic equipment's & appliances
15	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. Explanation of D.C. Generators- types –parts. E.M.F. equation-self excitation and separately excited Generators-Practical uses. Brief description of series, shunt and compound generators.
16	DC Motors - Terms used in D.C. motor-Torque, speed, Back-e.m.f. etc. their relations practical application. Related problems
17	Types, characteristics and practical application of D.C. motors. Special precaution to be taken in DC Series motors. Starters used in D.C. motors
18	Types of speed control of DC motors in industry Ward-Leonard control, Thyristor/electronic controls.
19	Insulating materials – properties common insulating materials, Classifications
20	Electric wirings , importance, I.E.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 Wiring system - Using casing
21	Insulating materials – properties common insulating materials, classifications
22	Electric wirings , importance, I.E.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 Wiring system - Using casing capping, P.V.C., concealed system. -Maintenance & Repairing data sheet preparation.. Specifications, standards for conduits & accessories
23	Earthing - Principle of different methods of earthing. Importance of Earthing. -Earth Leakage Relay.
24	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. ckts. Both series & parallel power consumption P.F. etc. Concept three-phase Star & Delta connection Line voltage & phase voltage, current & power in a 3 ph ckt, with balanced and unbalanced load.

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25	<u>TRANSFORMERS</u> Working principle of Transformer, classification C.T., P.T. Instrument and Auto Transformer/Variac Construction, 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 Transformer oil testing and Tap changing off load and onload. Transformer bushings and termination.
26	<u>ALTERNATOR</u> – Explanation of alternator, prime mover, types, regulations, phase sequence, specification of alternators and brushless alternator. Automatic Voltage Regulator.
27	<u>Electrical measuring Instruments</u> - -types - Deflecting torque, Controlling torque & Damping torque, -Moving coil permanent magnet -Moving iron -Range extension -Multimeter -Wattmeter - P.F.meter -Intergrading type, Digital Energy meter – megger. -Energy meter -Frequency meter - Tri vectormeter -Max Demand meter -Phase Sequence indicator -Multimeter –Analog andDigital - C.R.O,
28	Explanation of light White light-illumination factors, intensity of light –importance of light, human eye factor units. Types illumination & lamps -Neon sign Halogen, Mercury vapour, sodium vapour, Fluorescent tube CFL, Solar lamp applications, Concept of Energy -Characters watt ages, fixing places. Types of lighting. Decoration lighting Drum Switches, Direct & indirect lighting-efficiency in lumens per watt, colour available. Thumb rule calculations of lumens. Estimating placement of lights and fans and ratings.
29	<u>TRANSFORMER</u>– winding , Principle of different winding techniques
30	D.C. m/c Winding-- pole pitch, coil pitch, back pitch, front pitch , Lap & Wave winding , Progressive and retrogressive winding.

31	SYNCHRONOUS MOTOR - Working principle, effect of change of excitation and load. Application in industry in power factor improvement.
32	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. Single phase induction motor- Working principle, different method of starting and running (capacitor start/capacitor run, shaded pole technique). FHP motors.
33	A.C. m/c Winding-- Armature winding terms, coil side, end coil and grouping of coils. Connection to adjacent poles, connected armature winding, alternate pole connection, armature winding.
34	Universal motor- advantages Principle, characteristics, applications in domestic appliances and industry, Fault Location and Rectification.
35	Converter-inverter, M.G. Set- description-Characteristics, specifications-running and maintenance.
36	Techniques, procedures of Layout of conduit wiring as per I.S-732- 1963. Use of flame proof and explosion proof, Installation of P.V.C. conduct switches.
37	Fuse / cut out / kit Kat – function, characteristics, and materials. H.R.C Fuses – application. Contactors – Miniature circuit breakers. Relays – Thermal, Electromagnetic, solid state relays, Control Relays and Protective Relays.
38	Fuse / cut out / kit Kat – function, characteristics, and materials. H.R.C Fuses – application. Contactors – Miniature circuit breakers. Relays – Thermal, Electromagnetic, solid state relays, Control Relays and Protective Relays.
39	Industrial wiring. Code of practice & relevant span. Wiring of electric motors, control panel, etc. Types, specifications, advantages of different types of circuit brackets construction and maintenance. I.E.E. rules for overhead service lines, study of U.G. Cables and laying techniques. Working principle and construction of domestic and agricultural appliances-their maintenance.
40	Corona, Lightning arrestor/lighting conductor, Horn gap.
41	Introduction to Basic electronics- Semiconductor energy level atomic structure. 'P' & 'N' type of materials – P-N-junction. Diode-classification of Diodes – Reverse Bias and Forward Bias, Heat sink. Specification of Diode – PIV rating.
42	Explanation and importance of D.C. Rectifier ckt. Half wave, Full wave and Bridge ckt. L.E.D. and Solar cells. Filter cks-passive filter. Working principle and uses of an oscilloscope.

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43	Explanation of principle of working of a transistor- Types of transistors Characters of a transistors Biasing of transistors. Mode of use of transistor. Specification and rating of transistors
44	Explanation of transistor Amplifiers, Amplifiers. – class A,B & C Power amplifier.
45	Explanation of oscillator-working principle Explanation of stages and types. Multivibrator – applications.
46	OP-AMP – Working principles and applications. Timer I.C.555
47	Explanation. and working principle and practical applications of U.J.T.,F.E.T., S.C.R. Diac, Triac, power MOSFET, G.T.O & I.G.B.T.
48	D.C/A.C Power control using power transistor, thyristor. Voltage stabilizer, U.P.S. DC/AC motor drives using transistor/thyristor.
49	Power Supply Stabilizer, Ferro resistant circuit. DC/AC motor drives using Thyristor/Transistor control.
50	Digital Electronics -Binary numbers, logic gates and combinational ckts, Flip Flops, Counter, Register & Timer.
51	Complete House-wiring layout. Circuit splitting load wire. I.E.E. Rules. Multistoried system. Fault finding and trouble shooting of domestic electrical appliances.
52	Decorative lighting - Fault finding techniques in Decoration lighting.

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