SOUTH WESTERN RAILWAY
RAILWAY RECRUITMENT CELL
Old GM's Office Complex, 2nd Floor, Club Road, Keshwapur, Hubballi-580023
website: www.rrchubli.in

General Departmental Competitive Examination (GDCE) Notification No.01/2026(GDCE)

(Only Regular Serving Railway Employees of SWR and RWF/YNK are eligible to apply)

Date of Publication of Notification	**28.10.2026**
Opening Date of Online Application	**09.11.2026**
Closing Date and Time of Online Application	**08.12.2026 @ 23:59 hrs.**

GDCE for filling up of 25% of Direct Recruitment Quota Vacancies viz. Goods Train Manager (Erstwhile Goods Guard) & Junior Engineers in various departments over South Western Railway

1. In terms of the instructions issued vide Railway Board's letter No.E(NG)I-93/PM2/16 dtd.20.08.1993 (RBE No.129/1993), No.E(NG)1/2023/PM1/12, dtd.20.06.2023 (RBE No.80/2023), No.E(NG)1/2023/PM1/12, dtd.14.07.2023 (RBE No.90/2023), No.E(NG)I/2023/PM1/19, dtd.07/08.10.2024 (MC No.69/2024), No.E(NG)1/2025/PM1/13, dtd.23.03.2026 (RBE No.28/2026) and other instructions issued from time to time, applications are hereby invited **ONLINE** for filling up the following posts in various departments over South Western Railway through General Departmental Competitive Examination (GDCE) from all the eligible regular serving Railway employees of South Western Railway and RWF/YNK as on the date of issue of notification.

2. The serving regular employees of Divisions/Units/Workshops/Headquarters of South Western Railway and Rail Wheel Factory/Yelahanka (RWF/YNK) are eligible to apply **except RPF/RPSF personnel** in terms of Railway Board's letter No.E(NG)I/2002/PM2/9, dtd.11.08.2003 (RBE No.139/2003). Law Assistant, Catering Inspector & Accounts Cadre are not eligible to apply in terms of Railway Board's letter No. E(NG)I/2000/PN2/12 dated 21.08.2001 (RBE No.165/2001). The applicants may register their applications for GDCE **ONLINE** within the stipulated date and time as per the instructions given below.

3. Breakup of the vacancies are indicated as under: -

Sl. No.	Department	Category / Post	Communal Break-up of Vacancies					Total
			UR	OBC	SC	ST	PwBD	
1	Operating	Goods Train Manager (Erstwhile Goods Guard)	126	56	43	22	0	247
2	Engineering	JE / Bridge	1	1	0	0	0	2
3	Engineering	JE / P.Way	1	0	1	0	0	2
4	Mechanical	JE / Mechanical Workshop	4	1	0	0	0	5
5	S&T	JE / S&T / Signal	2	0	0	0	0	2
		TOTAL	134	58	44	22	0	258

4. **AGE LIMIT:** The upper age limit will be 42 years for General candidates, 45 years for OBC candidates and 47 years for SC/ST candidates. **(Authority: RBE No.112/2018, dtd.02.08.2018 & corrigendum dtd.19.09.2018).** The age will be reckoned as on **01.01.2027 (Authority: RBE No.224/99, dtd.02.09.1999)**

   Cut-off date for age criteria is indicated below:

Community	UR	OBC	SC/ST
Age Group	18 to 42 years	18 to 45 years	18 to 47 years
Born After	01.01.1985	01.01.1982	01.01.1980

   NOTE: No age relaxation is allowed to SC/ST/OBC-NCL (Non-Creamy Layer) candidates applying against unreserved vacancies.

5. **PROOF OF AGE:** Matriculation/SSC/SSLC/HSC Certificate or mark sheet indicating Date of Birth issued by Board OR School leaving/Transfer certificate issued by School/College Authority.

6. Minimum Educational Qualification and Required Medical Standards:

Sl. No.	Name of the Post	Medical standard	Minimum Educational qualification
1	Goods Train Manager (Erstwhile Goods Guard)	A2	Degree from recognised University or its equivalent.
2	JE / Bridge	A3	(a)Three years Diploma in Civil Engineering or B.Sc. in Civil Engineering of three years duration or (b) a combination of any sub stream of basic streams of Civil Engineering from are cognized University/Institute.
3	JE / P.Way	A3	
4	JE / Mechanical Workshop	C1	Three years Diploma in (a) Mechanical / Electrical / Electronics / Manufacturing / Mechatronics / Industrial / Machining / Instrumentation and Control / Tools and Machining / Tools and Die Making / Automobile/Production Engineering OR(b)a combination of any sub stream of basic streams of Mechanical/Electrical/Electronics / Manufacturing / Mechatronics / Industrial / Machining / Instrumentation and Control / Tools and Machining/ Tools and Die Making/ Automobile / Production Engineering from a recognised University/Institute.
5	JE / S&T / Signal	A3	Three years Diploma in (a) Electrical / Electronics / Information Technology / Communication Engineering / Computer Science and Engineering / Computer Science / Computer Engineering OR (b) a combination of any sub stream of basic streams of Electrical / Electronics / Information Technology / Communication Engineering / Computer Science and Engineering / Computer Science / Computer Engineering from a recognized University / Institute.

6.1 Candidates should possess the prescribed educational qualification from recognized Board/University/Institute as on the date of issue of Notification. Candidates having higher educational qualification than the prescribed qualification may also apply. Those candidates who are appearing in and/ or awaiting results of the final examination need **NOT** apply. **Candidate should possesses the requisite educational/technical qualification on the date of notification and the same should be endorsed in the Service Register of the employees.**

6.2 Candidates are advised to raise request for updating educational qualification in HRMS by individual log-in and upload necessary documents and submit the copy of the same documents to dealing clerk to update the same in IPAS/HRMS if acquired subsequently after appointment and not entered in the Service Register / HRMS Module. At later stage if it is found that proper entries are not available in Service Register, then candidature of such candidate is liable to be rejected at any stage. **It is sole responsibility of the employee to ensure correct entries of the caste and educational qualification in the HRMS.**

7. ELIGIBILITY CRITERIA

7.1 Zone of Consideration:

a) Eligible staff working in the Levels of posts lower than the Levels of the posts for which GDCE is being conducted are eligible to appear in GDCE selections for all categories.

b) Eligible staff working in same Levels of posts for which GDCEs are being conducted are eligible to appear in selection for GDCE from non-safety to safety categories as well as safety to safety category posts **(Authority: RBE No.72/2017 dtd.24.07.2017)**

c) Eligible PwBD staff are eligible to apply for relevant posts (Other than Goods Train Manager & JE/Signal/S&T) on their own merit without relaxed standards.
(Authority: DoPT Office Memorandum No.36035/02/2017-Estt(Res) dtd.27.09.2022)

8. APPLICATION FEE : NIL

9. MODE OF APPLICATION

9.1 Applications should be registered **ONLINE** by filling up the required details, as will be made available in the website of RRC/SWR i.e., www.rrchubli.in The application has to be filled up carefully duly following the steps and instructions as provided on the website. The application portal will be open from **09-11-2026 till 08-12-2026 upto 23:59 hrs.**

9.2 In case any employee has any difficulty in registering his application **ONLINE**, they can use the 'Contact Us' button in the application portal. We will try to address your queries in two working days. Alternatively you can also send a mail to **rrcswr2026@gmail.com**.

9.3 To avoid last minute rush, candidates are advised in their own interest to register their applications **ONLINE** well before the closing date, since there may be possibility of failure/ inability to log on to the website of RRC/SWR on account of heavy load on the internet or website jam during last days. Candidates desiring to make any corrections in the application already filled can do so before being clicked FINAL SUBMISSION on **ONLINE** registration. After final submission and confirmation, no provision for editing the data is allowed.

9.4 The last date/ time for **ONLINE** registration is **08-12-2026 upto 23:59 hrs**. Railway Administration will not bear any responsibility if the candidates are not able to register their applications **ONLINE** within the last date/time, for any reason whatsoever.

10. Steps to be followed while registering the ONLINE Application:

10.1 Go to RRC/SWR website www.rrchubli.in and click on the application portal provided in the website.

10.2 Follow the steps outlined under the heading "HOW TO APPLY" on the application portal and complete all the required details. Upload supporting documents wherever mandatory.

10.3 Candidates are advised to use their active mobile number and active E-mail ID for the purpose of filling up online application. There will be **NO** paper correspondence and all the information will be sent through SMS and E-mail. If in case no E-mail is seen in inbox, please check your spam folder.

10.4 After filling up the details and reading the declaration, click on the preview button. The applicants can go through the details on using the preview button. At any stage before final submission, the application can be edited by clicking the sections shown on the top. Once the application is submitted there is no scope for editing. Candidates are advised to download or take a printout of application once it is submitted.

10.5 On submission of application by the applicants, the same will be sent to respective Division/Units (i.e. Personnel Department of HQrs., UBL, SBC, MYS, CAO/CN, TMO/HQ, UBLS (including the details of GSD/UBL) MYSS (including the details of MGSD/AP), RWF/YNK for ONLINE verification.

10.6 Designated Officers of HQrs/Division/Units for verification of application will be provided ID and Password. The HQrs/Division/Units will verify the details and certify the correctness of the data as per the SR and other details, make "ELIGIBLE"/ "INELIGIBLE" and submit to RRC ONLINE for further process. If any applicant has incorrectly indicated the unit, the designated officer shall forward the application to RRC/SWR, which shall, in turn, allot it to the unit to which the employee belongs. Once the details are verified and submitted by the designated officers, no further verification will be done at any level during the selection process. Hence, the verifying Officers should ensure the correctness of the data before submission to RRC after **ONLINE** verification.

11. **ONLY ONE APPLICATION:** Each eligible serving employee should submit only one application against the posts notified in this Notification and employees submitting more than

one application will be liable for disqualification. Even if, such a candidate gets selected inadvertently, he/she will be disqualified and they will not be considered for selection under this Notification for GDCE.

12. While filling up Online Applications, candidates have to submit their Preferences for Post (if eligible to appear in more than one post, considering they satisfy the educational qualification for the post). Candidates with partial options will be considered only for the specific posts/categories opted by them, subject to vacancy position at the time of allotment. In case no option is given for certain posts/categories, it will be considered as their unwillingness for the same. Please note that post preference once opted shall be treated as final and no change is permissible at any stage.

Note: In case the application is rejected for any reason, SMS and E-mail alerts will also be sent to the candidates on their registered mobile number and E-mail ID furnished by them during their **ONLINE** application. Candidates whose application/candidature is rejected will NOT be intimated by post.

THE ELIGIBLE CANDIDATES SHOULD TREAT THAT THIS NOTIFICATION ITSELF IS AN ALERT NOTICE FOR CONDUCTING COMPUTER BASED TEST (CBT) EXAMINATION WHICH WILL BE ADVISED AT SHORT NOTICE BY RRC/SWR.

13. Employees who are selected are liable to be posted to any Division/Unit of South Western Railway. **Those who are not willing for posting involving transfer, need not apply.** The allotment of division/unit of the selected candidates/employees will be at the discretion of the administration, subject to availability of GDCE quota vacancies. Candidates/Employee has no right to ask the Division/Unit of their choice.

14. A recent passport size color photograph (not older than one month) without cap and without wearing any colored glasses along with his/her signature below the **photograph in jpg/jpeg** file format should be uploaded **ONLINE** along with a photograph of signature. (Not more than 5 MB each)

15. The candidates shall also upload the Educational/Degree/Convocation/Passing Certificate in the **PDF format.**

16. RECRUITMENT PROCESS

16.1 The entire recruitment process shall involve single stage Computer Based Test (CBT) and document verification/Medical examination as applicable.

16.2 The standard of examination shall be like that of Direct Recruitment conducted by RRBs **(Authority: Letter No.E(NG)1/2025/PM1/13, dtd.23.03.2026 (RBE No.28/2026)**. The questions for the Computer Based Test (CBT) will generally be in conformity with the educational standards prescribed for the post.

16.3 The questions set in the Computer Based Test (CBT) will be of Multiple Choice Objective Type. English is the default language. In case the candidate wishes to choose any other language, then the same can be selected from the drop down list of languages such as Hindi, Urdu and local languages i.e. Kannada, Telugu, Tamil, Marathi & Konkani **(Authority: RBE No.149/2019 dtd.09.09.2019)**. The candidates have to give preference for any one of the above mentioned languages, while submitting **ONLINE** application. **In case of any difference/ discrepancy/dispute in the Questions between English and the opted language, the content of English version shall prevail.**

16.4 **There will be negative marking in CBT examination and marks will be deducted for each wrong answer @ 1/3rd of the marks allotted for each question.**

16.5 The date of examinations will be notified by RRC/SWR through SMS on registered mobile numbers & E-Mail address registered in the applications and on website of RRC/SWR.

16.6 During examination candidates should read the instructions on the computer terminal DASH BOARD carefully and follow them scrupulously. Failure to comply with the instructions may lead to disqualification of candidature.

16.7 The recruitment process may change for the post notified, as per the latest guidelines issued from time to time.

16.8 Employees selected under GDCE Scheme shall be subjected to initial training of the same duration prescribed for Direct Recruitees as the case may be.

16.9 The detailed information in connection with selection process against GDCE is furnished as under:

1. GDCE for Goods Train Manager:

Only single online application has to be submitted by the candidate through the link provided on the official websites of RRC. The Recruitment process shall involve Computer Based Test (CBT) and Document Verification/Medical Examination. Selection is made strictly as per merit, on the basis of above mentioned Recruitment stages.

Computer Based Test (CBT)

Exam Duration in Minutes	No. of Questions (each of 1 mark) from			Total No. of Questions
	General Awareness	Mathematics	General Intelligence and Reasoning	
90	40	30	30	100

The section wise distribution given in the above table is only indicative and there may be some variations in the actual question papers.

The standard of questions for the CBT will be generally in conformity with the educational standards prescribed for the posts.

The Questions will be of objective type with multiple choices and are likely to include questions pertaining to:

(a) Mathematics: Number System, Decimals, Fractions, LCM, HCF, Ratio and Proportions, Percentage, Mensuration, Time and Work, Time and Distance, Simple and Compound Interest, Profit and Loss, Elementary Algebra, Geometry and Trigonometry, Elementary Statistics etc.

(b) General Intelligence and Reasoning: Analogies, Completion of Number and Alphabetical Series, Coding and Decoding, Mathematical Operations, Similarities and Differences, Relationships, Analytical Reasoning, Syllogism, Jumbling, Venn Diagrams, Puzzle, Data Sufficiency, Statement- Conclusion, Statement- Courses of Action, Decision Making, Maps, Interpretation of Graphs etc.

(c) General Awareness: Current Events of National and International Importance, Games and Sports, Art and Culture of India, Indian Literature, Monuments and Places of India, General Science and Life Science (up to 10th CBSE), History of India and Freedom Struggle, Physical, Social and Economic Geography of India and World, Indian Polity and Governance-constitution and political system, General Scientific and Technological Developments including Space and Nuclear Program of India, UN and Other important World Organizations, Environmental Issues Concerning India and World at Large, Basics of Computers and Computer Applications, Common Abbreviations, Transport Systems in India, Indian Economy,

Famous Personalities of India and World, Flagship Government Programs, Flora and Fauna of India, Important Government and Public Sector Organizations of India etc.

2. GDCE for Junior Engineer of Various Departments:

Only single online application (common to all the notified posts – Junior Engineer (JE) has to be submitted by the candidate through the link provided on the official website of RRC. The entire recruitment process shall involve Computer Based Test (CBT) and Document Verification/Medical Examination as applicable. Selection is made strictly as per merit, on the basis of CBT.

Computer Based Test (CBT)

Duration : 120 minutes (160 Minutes for eligible PwBD candidates accompanied with Scribe)

No. of Questions : 150

Syllabus: The Questions will be of objective type with multiple choices and are likely to include questions pertaining to General Awareness, Physics and Chemistry, Basics of Computers and Applications, Basics of Environment and Pollution Control and Technical abilities for the post. The syllabus for General Awareness, Physics and Chemistry, Basics of Computers and Applications, Basics of Environment and Pollution Control is common for all notified posts under this notification as detailed below:

a) **General Awareness:** Knowledge of Current affairs, Indian geography, culture and history of India including freedom struggle, Indian Polity and constitution, Indian Economy, Environmental issues concerning India and the World, Sports, General scientific and technological developments etc.

b) **Physics and Chemistry:** Up to 10th standard CBSE syllabus.

c) **Basics of Computers and Applications:** Architecture of Computers; input and Output devices; Storage devices, Networking, Operating System like Windows, Unix, Linux; MS Office; Various data representation; Internet and Email; Websites & Web Browsers; Computer Virus.

d) **Basics of Environment and Pollution Control:** Basics of Environment; Adverse effect of environmental pollution and control strategies; Air, water and Noise pollution, their effect and control; Waste Management, Global warming; Acid rain; Ozone depletion.

e) **Technical Abilities:** For technical abilities, refer to Annexure-E

The section wise Number of questions and marks are as below:

Subjects	No. of Questions	Marks for each Section
General Awareness	15	15
Physics & Chemistry	15	15
Basics of Computers and Applications	10	10
Basics of Environment and Pollution Control	10	10
Technical Abilities	100	100
Total	150	150
Time in Minutes	120	

The section wise distribution given in the above table is only indicative and there may be some variations in the actual question papers. Virtual calculator will be made available on the Computer Monitor during CBT.

Discipline Mapping Tables:

Sl.No.	Three years Diploma in Engineering or Bachelor's Degree in Engineering/Technology	Exam Group
1	Mechanical Engineering	Mechanical and Allied Engineering
	Production Engineering	
	Automobile Engineering	
	Manufacturing Engineering	
	Mechatronics Engineering	
	Industrial Engineering	
	Machining Engineering	
	Tools and Machining Engineering	
	Tools and Die Making Engineering	
	Combination of any sub stream of basic streams of above disciplines	
2	Electrical Engineering	Electrical and Allied Engineering
	Combination of any sub stream of basic streams of Electrical Engineering	
3	Electronic Engineering	Electronics and Allied Engineering
	Instrumentation and Control Engineering	
	Communication Engineering	
	Computer Science and Engineering	
	Computer Engineering	
	Computer Science	
	Information Technology	
	Combination of sub streams of basic streams of above disciplines.	
4	Civil Engineering	Civil and Allied Engineering
	Combination of any sub stream of basic streams of Civil Engineering	
	B.Sc., in Civil Engineering of 3years duration	

All the candidates with the above qualification shall be tested in the Exam Group mapped as per the above chart.

A candidate possessing more than one minimum educational qualification, mapped to different Exam Groups, can choose any one Exam Group. These candidates would be eligible for all the posts for which they possess minimum educational qualifications.

NORMALIZATION OF THE MARKS:

The raw marks for single session paper and normalized marks for multi session paper will be used for computing Merit Index, which is a common benchmark for generating merit for candidates from differing Exam Groups.

CALCULATION OF MERIT INDEX FOR ALL PAPERS

In order to generate a common merit list comprising of candidates who gave examination from different exam groups, but eligible for a common post, merit index will be computed. For all papers for which there is only one session, actual marks obtained by the candidates will be used for calculating merit index, while for papers in multi-sessions; normalized marks will be calculated corresponding to the raw marks obtained by a candidate and the merit index will be calculated based on the normalized marks.

The Merit Index will be computed using the formula given below:

$$\text{Merit Index} = Sq + (St - Sq)\ \frac{M - Mq}{Mt - Mq}$$

(Merit Index is the relative score of a candidate within the discipline.)

M: Marks obtained by the candidate (actual / raw marks for single session exam and normalized marks for multi session exam. Mq: The qualifying marks for general category candidate in the paper (40).

Mt : The mean marks of top 0.1% or top 10 whichever is larger of the candidates who appeared in the paper (in case of multi session exam including all sessions)

Sq: 350 is the score assigned to Mq.

St : 900 is the score assigned to Mt.

The qualifying marks (Mq) for general category candidate is 40.

The Merit Index will be calculated for UR, OBC, SC, ST candidates whose actual marks for single session exam and normalized marks for multi session exam are equal or above the community qualifying marks prescribed in Para 13.2 of CEN No.05/2025. Based on the Merit Index generated a combined merit list of the candidates of different disciplines / Exam Group will be prepared in the descending order of merit and the allotment of the preference will be done on the basis of this merit list.

Candidates to be asked for their category preference, and exam group in which they will appear in the following format:

1.Post Preference Details

Category No.	Designation	Department	Priority

2. Exam Group Details

Exam Group	

17. MOBILE PHONES, PAGERS, CALCULATORS OR ANY OTHER COMPUTING/ COMMUNICATION/ELECTRONIC DEVICE/ GADGETS ARE PROHIBITED:

17.1 Candidates are prohibited from carrying mobile phones, pagers, calculators or any other computing/communication/electronic device/ gadgets to the examination center. If any candidate is found to be in possession of such device/gadgets in working or in switched off condition in the examination hall, his/her candidature shall be cancelled forthwith and he/she will be debarred from future examinations conducted by RRC. In addition, such employees are liable to be taken up under appropriate disciplinary/ criminal proceedings.

17.2 Candidates are strictly advised, in their own interest, not to bring any valuables and prohibited items to the venue of the examination, as arrangement for safe-keeping cannot be assured.

18. HALL TICKET (E-ADMIT CARD) FOR ONLINE EXAMINATION:

18.1 **E-ADMIT CARDS** to the eligible candidates will be made available on the website well in time before the Computer Based Test (CBT). Eligible candidates should log in at the link provided on RRC website using Registration Number and DOB, download the **E-ADMIT CARD** and take a printout.

18.2 Candidates must bring their **E-ADMIT CARDS** duly obtaining the signature of the concerned supervisor/controlling Officer in the space provided on the **E-ADMIT CARD**, while appearing for the Computer Based Test (CBT). This tantamount to a relieving letter for the purpose of attending the **CBT** by the concerned controlling authority.

18.3 RRC will not entertain any request for any change in examination centre allotted to eligible candidates.

19. Document Verification/Medical examination

Document verification and Medical examination will be done only for those candidates, who qualified in the CBT. Those called for Document Verification will have to submit the Original Academic/Technical/Community certificates at the respective allotted Divisions/Units for scrutiny. On satisfactory Document Verification, they will be directed for appropriate medical examination as required.

20. GENERAL INSTRUCTIONS

20.1 All eligible regular and serving railway employees of SWR are eligible for filling the ONLINE Application Form with no minimum service condition prescribed as per RBE 72/2024, Dated 02.08.2024.

20.2 The trade/exam group is to be specified by employees having ITI / Act Apprentice/Diploma / Engg. Qualification

20.3 Preference of all the posts as applied and for which employee is eligible may also be called for.

20.4 Minimum percentage of marks for eligibility in various categories: UR-40%, OBC-30%, SC-30%, ST-25%.

20.5 The PwBD candidates should be provided the Scribe wherever applicable. (Annexure-D)

20.6 In case of two or more candidates securing same marks, their merit position shall be determined by age criteria i.e., older person shall be placed at higher merit and in case age being same, then alphabetical order (a to z) of the same shall be taken into account to break the tie.

20.7 Candidates equal to the number of vacancies will be called for DV based on their merit in CBT and options.

20.8 Appointment of selected candidates is subject to their passing requisite Medical Fitness Test to be conducted by the Railway Administration, final verification of educational and community certificates and verification of antecedents / character of the candidates.

20.9 Admission to all stages of recruitment process shall be purely provisional, subject to the candidate satisfying the prescribed eligibility conditions.

20.10 Mere issue of e-call letter to the candidates will NOT imply that their candidature has been finally accepted by the RRC.

20.11 RRC conducts documents verification of eligibility conditions with reference to original documents only after the candidates have qualified in all the stages of examinations and are shortlisted for Document Verification. RRC may reject the candidature of any applicant at any stage of recruitment process. In case the candidate is found not fulfilling the requisite criteria and if appointed, such a candidate is liable to be removed from service summarily.

20.12 Before applying for the post(s) against this notification, candidates should satisfy themselves that they fulfill all the eligibility norms including age, educational qualification(s), community and medical standard(s). Candidates should ensure that they have requisite educational/technical qualifications from recognized Board/University/ Institute as on the closing date for online application submission.

20.13 Candidates should enter their Name, Father's Name and Date of Birth as recorded in the SSLC / Matriculation/High School Examination Certificate or an equivalent Certificate as well as in their service record. No subsequent request for its change will be considered.

20.14 In cases of name change, candidates should indicate their changed name only in the ONLINE application. However, the details should match with the Matriculation or Equivalent certificate as well as Service Record. Date of such change should be prior to the date of submission of ONLINE application.

20.15 Gazette Notification or any other legal document as applicable for such cases should be submitted at the time of Document Verification (DV) along with the acceptance letter of employer.

20.16 Signatures of the candidates on all documents should be identical in all stages of recruitment process and must be in running hand and not in block / capital or disjointed letters. Signatures in different style at the time of CBT, Document Verification; Medical examination etc. may result in cancellation of candidature.

20.17 Dates of examinations will be published on the website. The E-call letters for CBT, should be downloaded only from website. No call letter will be sent by post. The CBT centre, date and shift indicated in the E-call letter shall be final. RRC reserve the right to conduct additional CBT/, and /or additional document verification etc., without assigning any reason. Request for postponement of any of the above activity or for change of venue, date and shift will not be entertained under any circumstances.

20.18 Vacancies indicated in this Notification are provisional and may undergo any change (increase/decrease) or even become NIL in total or in specific Units/Communities/Posts at a later stage depending upon the actual needs of the Railway Administration. Also, additional posts if required by the Railway may also be included at later stage.

20.19 The Railway Administration also reserves the right to cancel the notified vacancies at any stage at its discretion and such decision will be final and binding on all.

20.20 The function of the RRC is to recommend names of suitable candidates to the concerned authorities of the Railway Division/Units who in turn will issue the offer of appointment letter subject to availability of vacancies and candidates satisfying all eligibility criteria.

20.21 Selected candidates will have to undergo training, wherever prescribed, and during training period payment will be regulated as per extant rules.

20.22 RRC reserves the right to incorporation any subsequent change/modifications/additions in the terms & conditions of recruitment under this Notification as necessitated and applicable.

20.23 Sparing of the candidate for taking the examination and issuing necessary duty passes, if required, as per rule, will be the responsibility of the concerned Division/Office/unit where the candidate is presently working. No travel authority shall be provided by RRC.

21. INVALID APPLICATION: Application with the following deficiencies will be summarily rejected.

21.1 Applications not registered through **ONLINE**.

21.2 Applications which are incomplete in any manner.

21.3 Applications of candidates not possessing the prescribed educational qualifications.

21.4 Applications of candidates not fulfilling the age conditions.

21.5 If more than one application registered by the same candidate, all such applications will be rejected.

21.6 Applications without uploading photograph, signature and certificates w.r.t. EQ/TQ

21.7 Applications where the required documents are not uploaded.

NOTE: The list is only illustrative and not exhaustive. The applications will be rejected on any other irregularity/deficiency noticed by the RRC at any stage and considered sufficient for rejection.

22. MISCONDUCT / MALPRACTICE

22.1 Candidates are warned that, they should not furnish any particulars that are false or suppress any material information while registering the **ONLINE** Application.

22.2 Candidates shall not bring or attempt to bring any political or other influence to further his/her interest in respect of selection process.

22.3 Any misconduct on the part of the candidate at any part of the selection process is strictly prohibited and such misconduct will lead to disqualification of the candidature and also appropriate disciplinary/criminal proceedings will be initiated against them.

22.4 Indulgence in any malpractices/misconduct will result in the rejection of the candidature at any stage of selection in addition to initiation of appropriate Disciplinary/Criminal proceedings.

23. MISCELLANEOUS:

23.1 The decision of RRC in all matters relating to eligibility, acceptance or rejection of ONLINE applications, issue of free Rail Passes, penal action for false information, modification of vacancies, mode of selection, conduct of CBT, allotment of examination centres, selection, allotment of posts of selected candidates etc., will be final and binding on the candidates and no enquiry or correspondence will be entertained by the RRC in this regard.

23.2 RRC will not be responsible for any inadvertent errors and reserves right to correct such errors.

23.3 Any legal issues arising out of this notification shall fall within the legal jurisdiction of Hon'ble Central Administrative Tribunal, Bangalore.

23.4 In the event of a dispute about interpretation, the English version of the notification will be treated as final.

23.5 Application under RTI Act: Any application even under RTI act seeking any information will not be entertained till the completion of the entire recruitment process.

23.6 All other relevant Railway Board guidelines and rules related to the conduct of GDCE shall be applicable.

24. DECISION OF RRC TO BE FINAL

In all matters connected with the GDCE notified vide this notification; the decision of the RRC/SWR will be final and binding on all concerned.

25. ABBREVATIONS USED

UR-Un Reserved, OBC-Other Backward Classes, SC-Scheduled Caste, ST-Scheduled Tribe, PwBD-Persons with Benchmark Disability.

26. This notification may be given wide publicity among all the staff of the HQ/Divisions/Workshops/Units/HQ/RWF/YNK to avoid any complaints at a later date.

27. The employees are advised to check the official website i.e. www.rrchubli.in regularly till finalization of selection process for updates in the matter.

28/10/26

CHAIRMAN
Railway Recruitment Cell
South Western Railway, Hubballi

ANNEXURE-A

FORMAT OF CASTE CERTIFICATE FOR SC/ST CANDIDATES

(Form of certificate to be produced by Candidate applying for appointment to Post under the Govt. of India SC/ST)

1.This is to certify that Shri*/ Srimati/ Kumari* .....son/daughter* of..... Village/ Town...../District/Division*.....of the.....State/Union Territory* belongs to the.....Caste*/Tribe which is recognized as a Scheduled Caste / Scheduled Tribe under:-

*The Constitution Scheduled Castes Order 1950.
*The Constitution Scheduled Tribes Order 1950.
*The Constitution (Scheduled Castes) (Union Territories) (Part C States) Order 1951;
*The Constitution (Scheduled Tribes) (Union Territories) (Part C States) Order 1951;
[As amended by the Scheduled Castes and Scheduled Tribes Lists (Modification Order 1956, the Bombay Re-organisation Act 1960, the Punjab Re- organisation Act 1966, the State of Himachal Pradesh Act 1970, the North Eastern Areas (Re-organisation) Act 1971 and the Scheduled Castes and Scheduled Tribes Orders, (Amendment) Act 1976]
The Constitution (Jammu and Kashmir) Scheduled Castes 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 Orders, 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 Castes Order, 1978
*The Constitution (Sikkim) Scheduled Tribes Order, 1978
*The Constitution (Jammu & 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/Srimati*.....father/mother*.....of Shri/Srimati/Kumari..... of Village/ Town*.....in/District/Division*.....of the State/UnionTerritory*.....who belongs to the.....Caste*/Tribe which is recognised as a Scheduled Caste/ Scheduled Tribe in the Station/ Union Territory* issued by the .....dated.

3. Shri/Srimati/Kumari* and /or* his/her* family ordinarily resides 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 the 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.Officers competent to issue caste/Tribe certificates.
1. District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st 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 Officers not below the rank of Tehsildar. 4. Sub-Divisional Officer of the area where the candidate and / or his / her family normally reside(s). 5. Certificates issued by Gazetted Officers of the Central or of a State Government Countersigned by the District Magistrate concerned. 6. Administrator/ Secretary to Administrator (Laccadive, Minicoy and Amindivi Islands).

ANNEXURE-B

OBC CERTIFICATE

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 recognised as a Backward Class under the Government of India, Ministry of Social Justice and Empowerment's Resolution No.....dated.....*.

Shri/Smt./Kum.*.....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 OM No. 36012/22/93-Estt(SCT), dated 8.9.1993 and modified vide Government of India, Department of Personnel and Training O.M.No.36033/1/2013-Estt. (Res) dated 27.05.2013 and 13.09.2017**.

Date:

DISTRICT MAGISTRATE /
DY. COMMISSIONER ETC.

(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 as OBC.
**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.

ANNEXURE-C

Proforma for declaration to be submitted by Other Backward Classcandidates at the time of document verification, who had applied for the post against RRC-SWR-GDCE-01/2026

DECLARATION

I,_____son/daughter of Shri_____ resident of village/town/city_____ District_____State_____ hereby declare that I belong to the _____ (indicate your sub caste) 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 Department of Personnel and Training Office Memorandum No. 36012/22/93-Estt.(SCT) dated 08.09.1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in column 3 of the Schedule to the above referred Office Memorandum dated 08.03.1993 and its subsequent revision through O.M.No.36033/1/2013-Estt. (Res) dated 27.05.2013 and 13.09.2017.

Place: Signature of the candidate

Date: (Name of the candidate)

ANNEXURE-D

GDCE FOR VARIOUS POSTS OF SOUTH WESTERN RAILWAY
LETTER OF UNDERTAKING FOR USING SCRIBE
RRC/SWR GDCE-01/2026

NOTE: Candidates who are Visually Impaired (VI) / candidates whose writing speed is affected by Cerebral Palsy / candidates with Loco Motor Disability / One Arm are eligible for Scribe as per RBE No.62/2017.

PARTICULARS OF SCRIBE PROPOSED TO BE ENGAGED BY THE CANDIDATE

I. Details of candidate

Paste here recent colour Passport Size Photograph of the candidate of size 3.5 cm x 4.5 cm (The colour photograph should not be more than 3 months old.

a. Name of the Candidate .....

b. Application No. .....

c. Division/Unit ....

d. Qualification of Candidate .....

e. Disability Type .....

f. Aadhaar No. of Candidate .....

II. Details of Scribe

Paste here recent colour Passport Size Photograph of the scribe of size 3.5 cm x 4.5 cm (The colour photograph should not be more than 3 months old.

a. Name of the Scribe .....

b. Date of Birth of the Scribe .....

c. Father's Name of the Scribe .....

d. Aadhaar No. of the Scribe .....

e. Address of the Scribe :.....

.....

f. Educational Qualification of the Scribe .....

.....

g. Relationship, if any, of the Scribe to the Candidate.....

III. DECLARATION BY THE CANDIDATE OF RRC-SWR- GDCE-01/2026:

I. We hereby declare that the particulars furnished above are true and correct to the best of our knowledge and belief. We have read/ been read out the instructions, attached with this form as given by the Railway Recruitment Cell, regarding conduct of the candidates assisted by Scribe/Scribes at this examination and hereby undertake to abide by them.

II. We understand that it is my responsibility and my appointed scribe's responsibility, that we will not do any malpractice during my CBT which will lead to cancellation of my candidature.

III. We declare that the Scribe himself/herself is not a candidate in this examination. We understand that in case it is found otherwise the candidature of both of us will be rejected.

IV. We declare that the scribe has not acted/will not act as Scribe to any other candidate of this examination.

(Signature of the Candidate)

(Signature of the Scribe)

Left thumb impression of the Candidate in the box given above

Left thumb impression of the Scribe in the box given above

Signature of the Invigilator

SOUTH WESTERN RAILWAY

ANNEXURE-E

S.N.	*Syllabus for Civil & Allied Engineering Exam Group – JE
1	**Engineering Mechanics-** Force (resolution of force, moment of force, force system, composition of forces), Equilibrium, Friction, Centroid and Center of gravity, Simple machines.
2	**Building Construction-** Building components (substructure, superstructure), type of structure (load bearing, framed and composite structures).
3	**Building materials-** Masonry materials (stones, bricks, and mortars), Timber and miscellaneous materials (glass, plastic, fiber, aluminum steel, galvanized iron, bitumen, PVC, CPVC, and PPF).
4	**Construction of substructure-** job layout, earthwork, foundation (types, dewatering, coffer dams, bearing capacity).
5	**Construction of superstructure-** stone masonry, brick masonry, Hollow concrete block masonry, composite masonry, cavity wall, doors and windows, vertical communication (stairs, lifts, escalators), scaffolding and shoring.
6	**Building finishes-** Floors (finishes, process of laying), walls (plastering, pointing, painting) and roofs (roofing materials including RCC).
7	**Building maintenance-** Cracks (causes, type, repairs-grouting, guniting, epoxy etc.), settlement (causes and remedial measures), and re-baring techniques.
8	**Building drawing-** Conventions (type of lines, symbols), planning of building (principles of planning for residential and public buildings, rules and byelaws), drawings (plan, elevation, section, site plan, location plan, foundation plan, working drawing), perspective drawing.
9	**Concrete Technology-** Properties of various types/grades of cement, properties of coarse and fine aggregates, properties of concrete (water cement ratio, properties of fresh and hardened concrete), Concrete mix design, testing of concrete, quality control of concrete (batching, formwork, transportation, placing, compaction, curing, waterproofing), extreme weather concreting and chemical admixtures, properties of special concrete (ready mix, RCC, pre-stressed, fiber reinforced, precast, high performance).
10	**Surveying-** Types of survey, chain and cross staff survey (principle, ranging, triangulation, chaining, errors, finding area), compass survey (principle, bearing of line, prismatic compass, traversing, local attraction, calculation of bearings, angles and local attraction) leveling (dumpy level, recording in level book, temporary adjustment, methods of reduction of levels, classification of leveling, tilting level, auto level, sources of errors, precautions and difficulties in leveling), contouring (contour interval, characteristics, method of locating, interpolation, establishing grade contours, uses of contour maps), area and volume measurements, plane table survey (principles, setting, method), theodolite survey (components, adjustments, measurements, traversing), Tacheometric survey, curves (types, setting out), advanced survey equipment, aerial survey and remote sensing.
11	**Computer Aided Design-** CAD Software (AutoCAD, Auto Civil, 3D Max etc.), CAD commands, generation of plan, elevation, section, site plan, area statement, 3D view.
12	**Geo Technical Engineering-** Application of Geo Technical Engineering in design of foundation, pavement, earth retaining structures, earthen dams etc., physical properties of soil, permeability of soil and seepage analysis, shear strength of soil, bearing capacity of soil, compaction and stabilization of soil, site investigation and sub soil exploration.
13	**Hydraulics-** properties of fluid, hydrostatic pressure, measurement of liquid pressure in pipes, fundamentals of fluid flow, flow of liquid through pipes, flow through open channel, flow measuring devices, hydraulic machines.
14	**Irrigation Engineering-** Hydrology, investigation and reservoir planning, percolation tanks, diversion head works.

15	**Mechanics of Structures**- Stress and strain, shear force and bending moment, moment of inertia, stresses in beams, analysis of trusses, strain energy.
16	**Theory of structures**- Direct and bending stresses, slope and deflection, fixed beam, continuous beam, moment distribution method, columns.
17	**Design of Concrete Structures**- Working Stress method, Limit State method, analysis and design of singly reinforced and doubly reinforced sections, shear, bond and development length, analysis and design of T Beam, slab, axially loaded column and footings.
18	**Design of Steel Structures**- Types of sections, grades of steel, strength characteristics, IS Code, Connections, Design of tension and compression members, steel roof truss, beams, column bases.
19	**Transportation Engineering**- Railway Engineering (alignment and gauges, permanent way, railway track geometrics, branching of tracks, stations and yards, track maintenance), Bridge engineering (site selection, investigation, component parts of bridge, permanent and temporary bridges, inspection and maintenance), Tunnel engineering (classification, shape and sizes, tunnel investigation and surveying, method of tunneling in various strata, precautions, equipment, explosives, lining and ventilation).
20	**Highway Engineering**- Road Engineering, investigation for road project, geometric design of highways, construction of road pavements and materials, traffic engineering, hill roads, drainage of roads, maintenance and repair of roads.
21	**Environmental Engineering**- Environmental pollution and control, public water supply, domestic sewage, solid waste management, environmental sanitation, and plumbing.
22	**Advanced Construction Techniques and Equipment**- Fibers and plastics, artificial timber, advanced concreting methods (under water concreting, ready mix concrete, tremix concreting, special concretes), formwork, pre- fabricated construction, soil reinforcing techniques, hoisting and conveying equipment, earth moving machinery (exaction and compaction equipment), concrete mixers, stone crushers, pile driving equipment, working of hot mix bitumen plant, bitumen paver, floor polishing machines.
23	**Estimating and Costing**- Types of estimates (approximate, detailed), mode of measurements and rate analysis.
24	**Contracts and Accounts**- Types of engineering contracts, Tender and tender documents, payment, specifications.

S.N.	**Syllabus for Electrical & Allied Engineering Exam Group– JE**
1	**Basic concepts**: Concepts of resistance, inductance, capacitance, and various factors affecting them. Concepts of current, voltage, power, energy and their units.
2	**Circuit law**: Kirchhoff 's law, Simple Circuit solution using network theorems.
3	**Magnetic Circuit**: Concepts of flux, mmf, reluctance, Different kinds of magnetic materials, Magnetic calculations for conductors of different configuration e.g. straight, circular, solenoidal, etc. Electromagnetic induction, self and mutual induction.
4	**AC Fundamentals**: Instantaneous, peak, R.M.S. and average values of alternating waves, Representation of sinusoidal wave form, simple series and parallel AC Circuits consisting of R.L. and C, Resonance, Tank Circuit. Poly Phase system – star and delta connection, 3 phase power, DC and sinusoidal response of R-Land R-C circuit.
5	**Measurement and measuring instruments**: Measurement of power (1 phase and 3 phase, both active and re- active) and energy, 2 wattmeter methods of 3 phase power measurement. Measurement of frequency and phase angle. Ammeter and voltmeter (both moving oil and moving iron type), extension of range wattmeter, Multimeters, Megger, Energy meter AC Bridges. Use of CRO, Signal Generator, CT, PT and their uses. Earth Fault detection.

6	**Electrical Machines**: (a) D.C. Machine – Construction, Basic Principles of D.C. motors and generators, their characteristics, speed control and starting of D.C. Motors. Method of braking motor, Losses and efficiency of D.C. Machines. (b) 1 phase and 3 phase transformers – Construction, Principles of operation, equivalent circuit, voltage regulation, O.C. and S.C. Tests, Losses and efficiency. Effect of voltage, frequency and wave form on losses. Parallel operation of 1 phase /3 phase transformers. Auto transformers. (c) 3 phase induction motors, rotating magnetic field, principle of operation, equivalent circuit, torque-speed characteristics, starting and speed control of 3 phase induction motors. Methods of braking, effect of voltage and frequency variation on torque speed characteristics, Fractional Kilowatt Motors and Single-Phase Induction Motors: Characteristics and applications.
7	**Synchronous Machines**: Generation of 3-phase e.m.f. armature reaction, voltage regulation, parallel operation of two alternators, synchronizing, control of active and reactive power. Starting and applications of synchronous motors.
8	**Generation, Transmission and Distribution**: Different types of power stations, Load factor, diversity factor, demand factor, cost of generation, inter-connection of power stations. Power factor improvement, various types of tariffs, types of faults, short circuit current for symmetrical faults. Switchgears and Protection: Rating of circuit breakers, Principles of arc extinction by oil and air, H.R.C. Fuses, Protection against earth leakage / over current, etc. Buchholz relay, Merz-Price system of protection of generators & transformers, protection of feeders and bus bars. Lightning arresters, various transmission and distribution system, comparison of conductor materials, efficiency of different system. Cable – Different type of cables, cable rating and derating factor.
9	**Estimation and costing**: Estimation of lighting scheme, electric installation of machines and relevant IE rules. Earthing practices and IE Rules.
10	**Utilization of Electrical Energy**: Illumination, Electric heating, Electric welding, Electroplating, Electric drives and motors.
11	**Basic Electronics**: Working of various electronic devices e.g. P N Junction diodes, Transistors (NPN and PNP type), BJT and JFET. Simple circuits using these devices.

S.N.	Syllabus for Electronics & Allied Engineering Exam Group – JE
1	**Electronic Components & Materials**: Conductors, Semi-conductor & Insulators; Magnetic materials; Jointing & Cleaning materials for U/G copper cable & OFC; Cells and Batteries (chargeable and non-chargeable); Relays, Switches, MCB & Connectors.
2	**Electronic Devices and circuits**: PN Junction diodes, thyristor; Diode and triode circuits; Junction Transistors; Amplifiers; Oscillator; Multivibrator, counters; Rectifiers; Inverter and UPS.
3	**Digital Electronics**: Number System & Binary codes; Boolean Algebra & Logic gates; Combinational & Sequential logic circuits; A/D & D/A converter, counters; Memories
4	**Linear Integrated Circuit**: Introduction to operational Amplifier; Linear applications; Non Linear applications; Voltage regulators; Timers; Phase lock loop.
5	**Microprocessor and Microcontroller**: Introduction to microprocessor, 8085 microprocessors working; Assembly Language programming; Peripherals & other microprocessors; Microcontrollers
6	**Electronic Measurements**: Measuring systems; Basic principles of measurement; Range Extension methods; Cathode ray oscilloscope, LCD, LED panel; Transducers
7	**Communication Engineering**: Introduction to communication; Modulation techniques; Multiplexing Techniques; Wave Propagation, Transmission line characteristics, OFC; Fundamentals of Public Address systems, electronic exchange, Radar, Cellular and Satellite Communication.

8	**Data communication and Network**: Introduction to data communication; Hardware and interface; Introduction to Networks and Networking devices; Local Area Network and Wide area network; Internet working.
9	**Computer Programming**: Programming concepts; Fundamentals of 'C' and C ++; Operators in 'C' and C++; Control Statements; Functions, Array String & Pointers, File Structure; Data Structure and DBMS
10	**Basic Electrical Engg.**: DC Circuits; AC fundamentals; Magnetic, Thermal and Chemical effects of Electric current; Earthing - Installation, Maintenance, Testing,

S.N.	Syllabus for Mechanical & Allied Engineering Exam Group– JE
1	**Engineering Mechanics**:- Resolution of forces, Equilibrium and Equilibrant, parallelogram law of forces, triangle law of forces, polygon law of forces and Lami's theorem, couple and moment of a couple, condition for equilibrium of rigid body subjected to number of coplanar non-concurrent forces, definition of static friction, dynamic friction, derivation of limiting angle of friction and angle of repose, resolution of forces considering friction when a body moves on horizontal plane and inclined plane, calculation of moment of inertia and radius of gyration of : (a) I-Section (b) channel section (c) T-Section (d) L-Section (Equal & unequal lengths) (e) Z- Section (f) Built up sections (simple cases only), Newton's laws of motion (without derivation), motion of projectile, D'Alembert's principle, definition law of conservation of energy, law of conservation of momentum.
2	**Material Science**: - Mechanical properties of engineering materials – tensile strength, compressive strength, ductility, malleability, hardness, toughness, brittleness, impact strength, fatigue, creep resistance. Classification of steels, mild steel and alloy steels. Importance of heat treatment. Heat treatment processes – annealing, normalizing, hardening, tempering, carburizing, nitriding and cyaniding.
3	**Strength of Materials**: - Stress, strain, stress strain diagram, factor of safety, thermal stresses, strain energy, proof resilience and modules of resilience. Shear force and bending moment diagram – cant leaver beam, simply supported beam, continuous beam, fixed beam. Torsion in shafts and springs, thin cylinder shells.
4	**Machining**: - Working principle of lathe. Types of lathes – Engine lathe – construction details and specifications. Nomenclature of single point cutting tool, geometry, tool signature, functions of tool angles. General and special operations – (Turning, facing, taper turning thread cutting, knurling, forming, drilling, boring, reaming, key way cutting), cutting fluids, coolants and lubricants. Introduction to shaper, slotter, plainer, broaching, milling and manufacture of gears, heat treatment process applied to gears.
5	**Welding**: – Introduction, classification of welding processes, advantages and limitations of welding, principles of arc welding, arc welding equipment, choice of electrodes for different metals, principle of gas (oxy-acetylene) welding, equipment of gas welding, welding procedures (arc & gas), soldering and brazing techniques, types and applications of solders and fluxes, various flame cutting processes, advantages and limitations of flame cutting, defects in welding, testing and inspection modern welding methods, (submerged, CO2, atomic – hydrogen, ultrasonic welding), brief description of MIG & TIG welding.

6	**Grinding & Finishing Process**: - Principles of metal removal by grinding, abrasives, natural and artificial, bonds and binding processes, vitrified, silicate, shellac rubber, grinding machines, classification: cylindrical, surface, tool & cutter grinding machine, construction details, relative merits, principles of centreless grinding, advantages & limitations of centreless grinding work, holding devices, wheel maintenance, balancing of wheels, coolants used, finishing by grinding, honing, lapping, super finishing, electroplating, basic principles –plating metals, applications, hot dipping, galvanizing tin coating, parkerising, anodizing, metal spraying, wire process, powder process and applications, organic coatings, oil base paint, lacquer base enamels, bituminous paints, rubber base coating.
7	**Metrology**: -Linear measurement – Slip gauges and dial indicators, angle measurements, bevel protractor, sine bar, angle slip gauges, comparators (a) mechanical (b) electrical (c) optical (d) pneumatic. Measurement of surface roughness; methods of measurements by comparison, tracer instruments and by interferometry, collimators, measuring microscope, interferometer, inspection of machine parts using the concepts of shadow projection and profile projection.
8	**Fluid Mechanics & Hydraulic Machinery**: - Properties of fluid, density, specific weight, specific gravity, viscosity, surface tension, compressibility capillarity, Pascal's law, measurement of pressures, concept of buoyancy. Concept of Reynold's number, pressure, potential and kinetic energy of liquids, total energy, laws of conservation, mass, energy and momentum, velocity of liquids and discharge, Bernoulli's equation and assumptions, venturi meters, pitot-tube, current meters. Working principle & constructional details of centrifugal pump, efficiencies – manometric efficiency, volumetric efficiency, mechanical efficiency and overall efficiency, cavitation and its effect, working principle of jet & submersible pumps with line diagrams.
9	**Industrial Management**: - Job analysis, motivation, different theories, satisfaction, performance reward systems, production, planning and control, relation with other departments, routing, scheduling, dispatching, PERT and CPM, simple problems. Materials in industry, inventory control model, ABC Analysis, Safety stock, re-order, level, economic ordering quantity, break even analysis, stores layout, stores equipment, stores records, purchasing procedures, purchase records, Bin card, Cardex, Material handling, Manual lifting, hoist, cranes, conveyors, trucks, fork trucks.
10	**Thermal Engineering**: - Laws of thermo dynamics, conversion of heat into work vice versa, laws of perfect gases, thermo dynamic processes – isochoric, isobaric, isothermal hyperbolic, isentropic, polytrophic and throttling, modes of heat transfer, thermal conductivity, convective heat transfer coefficient, Stefan Boltzman law by radiation and overall heat transfer coefficient. **Air standards cycles** – Carnot cycle, Otto cycle, Diesel cycle, construction and working of internal combustion engines, comparison of diesel engine and petrol engine. Systems of internal combustion engine, performance of internal combustion engines. Air compressors their cycles refrigeration cycles, principle of a refrigeration plant.

END.