

11/11/17

**SELECTION TO THE POST OF AME (GROUP 'B') IN MECHANICAL
DEPARTMENT THROUGH DEPARTMENTAL SELECTION (70% QUOTA)**

Date: 23.08.2017

Max. Marks: 150

In case of any difference in the Rajbasha version and English version, the English version will hold.

Note:

- (i) Time allowed is THREE hours – 10 minutes extra for reading the question paper.
- (ii) Question paper has THREE sections
Section A – it contains ONE question of 15 marks. This is optional
Section B – it has SEVEN questions. Question No.1 (30 marks) is compulsory to all. Candidates who attempt Section-A can attempt any THREE from question 2 to 5 (15 marks each). Candidates not attempting Section-A have to answer all 4 questions from 2 to 5. Candidates may attempt any one out of questions 6 & 7 (10 marks each).
Section C – it has SIX questions of 10 marks each – Candidates can attempt any FIVE.

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SECTION-A

Question No.1 (15 marks)

- a. Describe Official Language Act.
- b. What is Section 3(3), give example of documents which have been made mandatory for bi-lingual issuance?
- c. What are the three exams held for checking proficiency in RAJBHASHA and awards are given?

SECTION-B

Question No.1 (30 marks)

There are 30 multiple choice questions – each carrying ONE mark.

Pick one correct alternative out of 4 given:

1.1 For cutting 10 mm steel plate in LHB shop which machine you will utilise.

- A. Laser cutting machine
- B. Plasma arc
- C. Oxy-acetylene gas cutting
- D. Job will be done from shearing machine of shell division.

- 1.2 Bolster machining of Fiat bogie is done on -
- A. 3 axis machine
 - B. 5 axis machine
 - C. Can be done on both 3 as well as 5 axis machine
 - D. Edge milling machine
- 1.3. How many bushes are required in Fiat bogie?
- A. 24
 - B. 12
 - C. 36
 - D. Nil
- 1.4. Recently ICF has decided to change wall thickness of LHB SHELL. Which of the following change has been taken?
- A. 1mm to 2 mm
 - B. 3mm to 2 mm
 - C. 2mm to 3 mm
 - D. 3mm to 1 mm
- 1.5. Which of the following gas in liquid form is required by Baileu make Laser cutting machine of LHB shop?
- A. Oxygen
 - B. Nitrogen
 - C. Co2
 - D. Pure Air
- 1.6. The process of welding used in Robotic Spot welding of IGM make in LHB shop is called
- A. TIG
 - B. MIG
 - C. CO2
 - D. Resistance
- 1.7. In model rake under manufacturing in furnishing in ICF, which of the wall panelling material is used?
- A. ACP
 - B. FRP
 - C. POLYCARBONATE
 - D. LP SHEET

1.8. AIR SPRINGS presently are being used in which type of LHB coaches.

- A. LWS
- B. LWSCN
- C. LWLRRM
- D. LACCN

1.9. MAX Permissible speed of Air conditioned coaches presently under manufacturing in ICF is -

- A. 110
- B. 130
- C. 160
- D. 200

1.10. Train -18 and Train -20 are the names given to which type of rolling stock which will be made in ICF

- A. 3 phase EMUs
- B. 3 phase DEMUs
- C. Train sets with under slung electrics
- D. Rake made out of Air conditioned LHB coaches

1.11. ICF is a -

- A. PSU
- B. Independent factory
- C. Production Unit under Ministry of Railways
- D. TAMILNADU GOVT's unit

1.12. Conical rubber springs are planned to be provided in -

- A. LHB coaches
- B. CONVENTIONAL ICF design EMUs and DEMUs
- C. Train sets
- D. None

1.13. Presently LHB air conditioned coaches built in ICF are provided with -

- A. Cast wheels
- B. Forged wheels
- C. Either can be used
- D. Fabricated

1.14. In EMUs Air springs are used in –

- A. Primary suspension.
- B. Secondary suspension
- C. Both
- D. None

1.15. Side walls and roof in LHB shell are made of -

- A. Side wall Ferritic SS roof Austenitic SS
- B. Side wall austenitic SS roof Ferritic SS
- C. Both Austenitic SS
- D. Both Ferritic SS

1.16. Underframe of LHB is made from –

- A. Austenitic SS
- B. Ferritic SS
- C. IRSM - 41
- D. Aluminium

1.17. Standard 3834 relates to –

- A. Cleanliness
- B. Productivity
- C. Welding
- D. Environment

1.18. ISO 50001 relates to –

- A. Energy conservation
- B. Environment
- C. Cleanliness
- D. New technologies

1.19. Full form of DETC currently under manufacturing is –

- A. Diesel electric train car
- B. Direct energy transfer current
- C. Diesel electric tower car
- D. Diesel electric trailer car.

1.20. KOLKATA metro rake currently under manufacturing in ICF has –

- A. 4 motor and 4 trailer coaches
- B. All eight motor coaches
- C. 2 motor coaches and six trailer coaches
- D. All eight trailer coaches.

1.21. Each LWLRRM power currently car has –

- A. Two DA SETS of 500 KVA each
- B. One DA set of 500 KVA
- C. One DA set of 750 KVA
- D. Two DA sets of 750 KVA each

1.22. SPART has –

- A. Two power cars
- B. 3 power cars
- C. One power cars
- D. None

1.23. Life of LHB coach is –

- A. 35 years
- B. 25 years
- C. 40 years
- D. 45 years

1.24. ICF is processing NABL certification for –

- A. Laboratory
- B. Museum
- C. AWTI
- D. LHB shop

1.25. IRIS standard is for –

- A. Importing
- B. Exporting
- C. Indigenous production
- D. Improving energy efficiency

1.26. 5S technique was developed in –

- A. Japan
- B. Germany
- C. USA
- D. China

1.27. FIAT bogie frames are painted –

- A. Before machining
- B. After machining
- C. As per convenience before and after painting
- D. NOT required to be painted as there are made out of Stainless Steel

1.28. CSP-1 and CSP-2 projects under execution in ICF are for –

- A. Production of EMUs
- B. Production of DEMUs
- C. Production of Metro coaches
- D. Production of stainless steel coaches

1.29. For new rolling stock who gives speed certificate -

- A. RDSO
- B. ICF
- C. Railway Board
- D. Zonal Railway

1.30. Which type of coupling is used in Kolkata Metro?

- A. CBC
- B. Screw coupling
- C. Schaku
- D. None of the above

Question no. 2 (15 marks)

Describe the layout of new Spring Shop coming up in ICF with a flow process chart.

Question no. 3 (15 marks)

Describe layout of Shop-19 with flow process chart for production of LHB shell.

Question no. 4 (15 marks)

Describe painting process of LHB coaches with a flow process chart clearly bringing out all the activities involved.

Question no. 5 (15 marks)

Describe ERP. What ADVANTAGES have accrued to ICF on account of its introduction?

Question no. 6 (10 marks)

What do you understand by Destructive and non-destructive testing? Give two examples of each.

Question no. 7 (10 marks)

Describe machines used in wheel shop. What pressure is required to press in a FIAT wheel on axle? Why wheel balancing is needed in FIAT wheels?

SECTION-C

Attempt any FIVE questions out of SIX given below – Each carries 10 marks

Question no. 1 (10 marks)

If you are made GM ICF, how will you tackle the problem of staff not staying for full 8hours in shop premises? Do you think loose allowed timings is a contributing factor? Is Biometric attendance process an answer? Are there ICF staff who are getting salary but not coming for work?

Question no. 2 (10 marks)

Describe details of welfare measures available to ICF employees which are not available to their counterparts in the neighbouring industrial units in CHENNAI in Private sector.

Question no. 3 (10 marks)

Why Rail Budget has been merged with General Budget? What measures do you propose to bring down expenditure in ICF; which will help in bringing down cost of coach; without compromising with quality?

Question no. 4 (10 marks)

Write short notes on any two.

- A. Factory's Act
- B. Workman Compensation Act.
- C. Hours of Employment Regulation Act.

Question no. 5 (10 marks)

- A. What's the difference between PH-41 and PH-42?
- B. What do you mean by a deposit work?
- C. What is WMS?
- D. What is RSP?

Question No.6 (10 marks)

- A. When a PAC needs to be issued for procurement.
Under what circumstances you will go for SLT process of tendering?
- B. What is the difference between Stores and Works contract?