

**Syllabus for Written test for Chief Instructors in BTC Carriage Workshop  
Jodhpur to the P.B.-2 9300-34800+4600 G.P**

**Part – A**

**1. Establishment**

Organisation of Railways :-Railway Board to zonal level, zonal Railway's and their Headquarters, Leave Rule, Pass Rule, Provident Fund and Pension Scheme, Labour Welfare Organisation, PNM, DAR, Factory Act, Workmen's Compensation Act, Payment of Wages Act, Minimum Wages Act, HOER Incentive Scheme.

**2. Store**

Imprest, Type of Stores, Indenting of stores, Accountal procedure, Return of Store, Stock verification, Tenders, types of tenders, pairing of issued notes, stock and non stock items, AAC.

**3. Accounts and Budget.**

Parliamentary control over budget, Demand for grants, Budgeting control works programme. Rolling stock programme, M&P programme, calculation of depreciated cost, head of Accounts, DRF, Capital OLWR, On-cost charges and their types. WMS accounts salient features of incentive scheme, August Review, Revised Estimate, Final modification, inventory control over budget, stock sheet Audit Report Draft Para.

**4. General Knowledge.**

Current Affairs, who's Abbreviations, Indians History- Important events, General Knowledge questions concern to Indian Railways, Geography, General Science.

**5. Raj Bhasha.**

Important articles of Rajbhasha Act, Various awards, Motivations for of Raj Bhasha, Progress made in using of Hindi different between Raj Bhasha and Rastra Bhasha, Essay in Hindi.

**Part –B.**

Basic knowledge of various trades in Carriage workshop i.e. Mechinist, Black smith, Moulder, Welder Fitter, etc. Knowledge of various machine & tools Machining operation. Heat treatment and forging, moulding & casting types of weldings, gat cutting, welding transformers, Wheel & Bogie fitting Brake gear Buffer & draft gear of coaches & other related repair work of coches, Various type of coaches, their salient feature.

**Syllabus for Written Test for Sr. Instructors in BTC Carriage Workshop  
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**4. General Knowledge.**

Current Affairs, who's Capital, Important historical events of Indians History, General Science, day to day science, General Knowledge question concern to Indian Railways.

**5. Raj Bhasha.**

Important articles of Rajbhasha Act, Various awards, Motivations for the Raj Bhasha, Progress made in usage of Hindi difference between Raj Bhasha a Rastra Bhasha, Essay in Hindi.

**Part- B**

**Fitter Trade:**

Basic Knowledge of coach POH activities, Different types of coaches, their nomenclature, different components sizes etc. Different typs of bogies, Different types of bearing used in coaches, their construction features and maintenance type of bearing used in coaches, their construction features and maintenance. Vacuum brake and Air Brake system of coaches modification in coaches, Indo German Project, Different types of welding and common welding defects.

Present Incentive System in workshop.

How to improve productivity in Workshop.

Neutral examination of coaches after POH

ISO 9000/14001. IMTE Knowledge.

### **CBR Trade :**

Basic Knowledge of coach POH activities. Different types of coaches, their nomenclature, different components sizes etc. Modification in coaches, different types of wood used in coaches, different types of wood used in coaches stock. Flooring composition in coaches. Corrosion repair of coaches, different types of welding & common welding defects. Crashworthy features on coaches. Present Incentive system in Workshop How to improve productivity in Workshop. Safety to be observed in Workshop. Neutral examination of coaches after POIL ISO 9000/14001.

### **Paint Trade :**

Basic knowledge of coach POH activities, different types of coaches, their nomenclature, Painting of coaches, Types of painting schedule of coaches, different types of corrosion and how to prevent corrosion, Phosphating plant working.

Present Incentive system in Workshop, How to improve Productivity of Workshop. Safety to be observed in Wrokshop, Neutral examination of coaches after POH ISO 9000/14001.

### **Machinist Trade:**

Basic Knowledge of coach POH activities. different types of machine used in Workshop like lathe, drilling, boring, milling, wheel lathe, CNC machine etc.

Machine Tool nomenmenelature, Basic knowledge of IMTE. Measurement of measuring tools, limits fits & Tolerance, GO & NO GO Gauges, Gauges & Fixture & Jigs. Engineering Drawing wheel and Axle's sized Assembly & Disassembly.

Production Planning & control, Present Incentive system in Workshop. How to increase productivity in Wroskhop. Safety to be observed in Workshop ISO 9000/14001.

### **Black Smith Trade :**

Non destructive testing methods, Heat treatment process. Iron – carbon equilibrium diagram, different types of coast iron, steel and non ferrous materials used on Indian Railway Energy conservation, categorization of springs.

Production Planning & control Present incentive system in Workshop How to increase productivity in Workshop, Safety to be observed in Wrokshop ISO 9000/14001.

## **Millwright Trade :**

Working principle of EOT crane. Working of compressors, different types of maintenance of machining and plants, transmission & power basic knowledge of IMTE.

Production planning & control. Present Incentive system in workshop. How to increase productivity in Workshop. Safety to be observed in Workshop. ISO 9000/14001.

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Current Affair, who's who, Abbreviations, Capitals, Important Historical events.

**5. Raj Bhasha**

Important articles of Rajbhasha Act, Various awards, Motivation for of Raj Bhasha, Progress made in usage of Hindi different between Raj Bhasha and Rastra Bhasha, Essay in Hindi.

**Part - B**

**Fitter Trade :**

Coach POH procedure, conversation of table, measurement & measuring tools, tolerance, different types of bogies & POH procedure, Vacuum brake & Air Brake system of coaches.

**CBR Trade :**

Coach POH procedure, corrosion repair of coaches, different types of coaches, woods & flooring composition. Welding & its type – procedure – finish – surface preparation.

**Painter Trade :**

Coach POH procedure, different types of corrosion, working principle of Phosphating plant 'A' & 'B' schedule of coaches. Various type of plating (ni, cr) Buffing etc. Fire retentent material used in coaches.

**Machinist Trade**

Measurement & measuring tools, Marking and Marking tools, cutting, cutting speed for various metal, surface finish. Heat treatment, Ganges, Limit fits & Tolerance, Jigs & Fixtures.

**Black Smith Trade :**

Gorging Smithy tools, forging operation. Heat Treatment, springs POH procedure, various type of steel, die for forging.

**Millwright Trade :**

Pipe and pipe fittings, bearing lubricat5ion & lubricants, Installations & Maintenance of machine. Hydraulic system in machine. Vehicle repaired in millwright shop – their system and maintenance. Crances – wheel shop machine, machine shop – Smith shop machine and their maintenance.