

पश्चिम मध्य रेल
West Central Railway



CONFIDENTIAL

कार्यालय महाप्रबंधक / G.M. Office
कार्मिक शाखा / Personnel Branch
जबलपुर / Jabalpur-482001

No. WCR/PHQ/Conf/Selec/Engg/JE(Br.)/2021

Dated 12.11.2021

All Concerned
West Central Railway

Sub:- Publishing of Answer Key of written examination for Selection of Junior Engineer (Bridge), Pay Scale 9300-34800, GP-Rs.4200/- PB-II (7th CPC Level 6 in Pay Matrix) under 25% Departmental Quota in Engineering Department

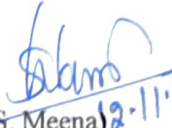
Ref.:- This office letter no. WCR/PHQ/Rulling/General Instruction/E-107687 dated 09.11.2021 .

In reference to above, answer key of the written examination held on 29.10.2021 for the post of Junior Engineer (Bridge), Pay Scale 9300-34800, GP-Rs.4200/- PB-II (7th CPC Level 6 in Pay Matrix) under 25% Departmental Quota in Engineering Department is attached herewith.

Candidates appeared in the written examination, if have any objection with the answers given in the answer key, may submitted their representation addressed to Dy.CPO/HQ/WCR on email ID (dycpohqwr@gmail.com), whatsapp (No.9752415605) with the copy of authentic source/documents regarding the objection within a period of 05 days from the issue of this letter. No objection/representation regarding answer key will be entertained after stipulated period i.e. 17.11.2021.

This is for information.

DA:- As above.


(H.S. Meena) 12.11.21

Dy.Chief Personnel Officer/HQ
WCR/Jabalpur

Answers to Question Paper

(FOR JE /BRIDGE 25% DEPARTMENTAL QUOTA)

(Held on 29.10.2021)

1. How many jacks are required for greasing of steel sliding bearings:
 - a. Two jacks of 50T capacity
2. All sliding and roller & rocker bearings are generally cleaned and greased once in
 - b. Three years
3. For greasing of sliding bearings,
 - a. Grease and graphite in working proportion is applied
4. Bridge Inspector shall inspect in detail : The steel work and bearings of all girders 12.2 m clear span and above including that of road under/over bridges once in:
 - a. 5 years
5. Bridge Inspector is responsible for carrying out detailed inspection of all welded, RCC, PSC and composite girders and their bearing within -----of installation.
 - a. One year
6. Bridge Inspector shall inspect welded girders once in -----, the initial inspection being carried out **one year** after installation.
 - a. 3 years
7. Before taking up work on a bridge, banner flag should be erected at a distance of _____ m from the place of work.
 - c. 600 m
8. The oil in oil bath bearing must be changed completely once in :
 - a. 5 years
9. Which type of bearing need not be greased as they are corrosion resistant and retain the smooth surface:
 - c. Phosphorous Bronze Bearing
10. Elastomeric bearings are made of :
 - a. Natural or synthetic rubber reinforced with steel plates
11. The date of painting of steel work should be painted :
 - a. In white on the outside of the left girder of the first span

12. At important bridge the HFL mark should be made by the side of flood level gauge:
 - a. In white paint
13. The maximum time lag between successive operations of surface preparation and the application of primer coat, while painting steel work shall not exceed:
 - a. 24 hours
14. The maximum time lag between successive operations of primer coat and first finishing coat, in case of painting of steel work shall not exceed:
 - a. 7 days
15. Loss of camber in steel girders can be mainly attributed to:
 - a. All of the above.
16. Steel triangulated (open web) girders are provided with ----- to compensate for deflection under load.
 - a. Camber
17. General Arrangement Drawings for all railway bridges on open line shall require the approval of ----- of the concerned Zonal Railway.
 - a. Chief Bridge Engineer
18. Shelf life of aluminum paint, when paste and oil are not mixed is:
 - a. One year
19. The -----level line should be painted distinctly by a 25mm broad white line along with the year of its occurrence.
 - a. Highest flood level
20. Danger level should be distinctly marked in ----- colour in all the Bridges.
 - a. Red
21. In pneumatic riveting, the rivet shank should be about----- less than the diameter of the drilled hole.
 - a. 1.5mm
22. The rivet must be driven straight, while hot, keeping ----- coaxial:
 - a. Hammer
23. Rivets conforming to ----- specifications only should be used.
 - a. IRS
24. In areas where there is no severe corrosion, Priming coat consists of :
 - a. One heavy coat of ready-mixed paint red lead
25. The shelf life of Paint Red Lead Ready Mixed (IS: 102) used in Railways is-----.
 - a. 4 months

26. Flame cleaning for surface preparation before painting of steel structure of bridges, the process consists of localized application of an ----- on the steel surface.
a. Oxy-acetylene flame
27. Blast cleaning: It consists of cleaning the surface with the help of high velocity impact of abrasives like ----- against the surface.
a. Sand or grit
28. Speed indicator board should be erected at a distance of _____ m ahead of the bridge under repair.
d. 30 m
29. Metalizing process, at least one layer of the coating must be applied within:
a. 4 hours of blasting
30. Metalizing process: surface must be finished to the specified thickness within
a. 8 hours of blasting
31. The metal coating shall be checked for thickness by an approved magnetic thickness measuring gauge.
a. Magnetic thickness measuring gauge
32. Wherever oil bath bearings are provided, inspection of the bearings, after removal of the casings to the extent necessary, should be carried out at least :
a. Once in 5 years
33. Minimum clear span of ----- should be provided in new bridges and rebuilding of bridges on existing lines.
a. 1 m
34. The center and highest point of an arch barrel is called-----.
a. Crown
35. Bearing piles: These piles transfer the load primarily by bearing resistance developed at the pile -----, without taking into account the frictional resistance.
a. Tip or base
36. Repair/Maintenance/Rehabilitation/Rebuilding of bridges is to be planned/carried out in accordance with ----- assigned to each bridge to represent its physical condition in periodic inspections. When in the course of inspection of bridge, defects are noticed.
a. Unique Rating Number
37. Where the bed blocks are shaken or displaced and where masonry below has developed cracks, bed blocks may be encased in RCC and the affected portion of the masonry in piers below -----.
a. Jacketed

38. All fillet and butt welds for the fabrication of welded I-section, are required to be made by, either fully automatic or semi automatic type.
a. Submerged arc welding process
39. In cement pressure grouting pressure is kept as
a. 2 to 4 kg/sqcm
40. The "Numerical Rating System" for bridge inspection assigns a 'Unique Rating Number' (URN) to represent the physical condition of a bridge.
a. Lower the URN more serious is the deteriorated condition of a bridge.
41. The URN of a bridge is arrived at based on the condition of components and a system assigned to each of them.
a. Condition Rating Number
42. 1 A condition which warrants
a. Rebuilding / rehabilitation immediately.
43. 2A condition which requires rebuilding / rehabilitation:
a. On a programmed basis
44. 3 A condition which requires :
a. Major/special repairs
45. 4 A condition which requires
a. Routine maintenance
46. 5A condition means
a. Sound condition
47. From the CRNs for different components of a bridge, ----- Number for the bridge as a whole is given.
a. Overall Rating Number
48. In case of PSC girders, assessment of loss of camber should be done. Camber measurement should be up to 20m span:
a. Centre of the span
49. The camber of pre-stressed concrete girder should be checked ----- a year by any reliable method and the same recorded.
a. Once
50. A system of two plates, one sliding over the other makes one of the -----type of bearings.
a. Simplest
51. It is common, on Indian Railways, to provide roller bearings at the free end of open web through girders, and ----- bearings at the fixed end.
a. Rocker

52. The elastomeric bearings offer number of advantage as listed below:
a. Requires minimum maintenance compared to all the bearings
53. Superstructure consists of all the parts of the bridge that are supported by the ----- on abutments or piers.
a. Bearings
54. Sub-structure consists of all those parts of the bridge, which transmit loads from the bridge span to the -----.
a. Ground
55. Any abrupt change or kink in the alignment of bridge may indicate a ----- movement of pier.
a. Lateral
56. As a minimum, sub-structures must receive routine underwater inspection at intervals not exceeding -----.
a. Five years
57. To ensure safety of bridge, ----- inspection of bridges is becoming important activity for inspection and maintenance of bridge substructures and foundations.
a. Underwater
58. Rocker Bearing permits -
(c) Rotational movement
59. Loss of camber of steel girders can be due to
(d) Any of these.
60. Flooring is required to be provided for bridges with -
(b) Shallow foundations
61. For field riveting, if diameter of the rivet is 20 mm, the dia of the hole should be
(c) 21.5 mm
62. Aluminum paint is also used in bridge painting work because
(b) bright appearance
63. Extra Air in the Air Compressor should be released by means of -
(d) Reflex valve
64. BGML loading stands for
c. Broad Gauge Main line Loading
65. RBG loading stands for
a. Revised Broad Gauge loading
66. Hindi Day is celebrated every year on
(d) 14th Sept.
67. Railway Bridge having total waterway 18m or more is called
a. Major bridge

68. Bridge having linear water way of 300 m or more or total water way of 1000sqm or more are called
b. Important bridge
69. In epoxy grouting pressure is kept as –
d. 3.5 to 7 Kg/sqcm
70. Repairing by cement pressure grouting can be adopted in case of
e. All of above
71. On bridges with each span of 100 m and more, trolley refuges are to be provided at a spacing of
(d) on each pier
72. The minimum cushion specified over an arch bridge is
(c) 1.0m
73. In the eight digit code given in the rating system the first digit is called
(b)ORN
74. Through, Semi-through and Deck bridge are the type of bridge based on
c. Position of railway with respect to main girder
75. Danger level is fixed on the basis of
(a) Type of girder
76. In case of water crossing danger level
(c) Traffic be suspended till a responsible person inspects the site and declares it safe for running traffic.
77. How many days LAP in a calendar year, a railway employee is entitled to get.
b. 30
78. How many days LHAP in a calendar year a railway employee is entitled to get?
b. 20
79. Paternity leave admissible to a railway employee is of how many days?
a. 15
80. Maximum days for which LAP can be encashable at the time of retirement :
c. 300
81. Child care leave is admissible if the child of the employee is below__ years :
b. 18
82. As per HOER, a Section Controller is in which category?
d. Intensive

83. A non-gazetted railway employee is entitled to get first class pass, if his Grade Pay is :
a. Rs. 4200
84. A non-gazetted railway employee is entitled to get second class pass "A", if his Grade Pay is Rs. :
a. 2800
85. As per Payment of Wages Act, wage period cannot exceed :
b. One month
86. As per the provisions of the Payment of Wages Act, 1936, wages need to be paid to employees before the expiry of the - day of the last day of the wage period:
a. 7th
87. Workmen's Compensation Act is applicable in case, where
c. Both a & b above
88. Which railway employee is covered under Workmen's Compensation Act?
d. All of the above.
89. In case of violation of Payment of Wages Act, an employee may file a case with :
a. Labour Commissioner
90. A Junior Engineer Bridge of railways is categorized as ----- as per HOER:
b. Excluded
91. For suspension of a Railway employee, which of the following standard form is issued:
c. SF-1
92. To initiate D&AR action for major penalty, which of the following standard form is issued:
a. SF-5
93. Which conduct rules are applicable for railway employees?
a. Railway Service (Conduct) Rules 1966
94. For condemnation of materials, which of the following note is prepared?
a. DS-8
95. For transfer of material from one work to another and debit and credit of expenditure from one work to another, which of the following voucher is used?
b. RE9B
96. Price List Code No. is given for which of the following?
a. Stock Items

97. Who is the present Chairman & CEO Railway Board?
c. Suneet Sharma
98. Who is Defence Minister of India?
b. Rajnath Singh
99. Who is present Minister of Railways?
c. Ashwini Vaishnav
100. Who is General Manager of West Central Railway
b. S.K. Gupta
101. What is the Official Language of the Union of India?
a. Hindi in Devnagri Script.
102. When was the Official Languages Act passed?
a. 1963
103. According to Official Language Rules, under which region, Punjab comes?
b. B
104. When was the Official Languages Act 1963 amended?
b. 1967
105. In which state, "Urdu" has been declared as Official Language?
a. Andhra Pradesh
106. Andaman & Nikobar is in region ----, as per official language rules.
a. A
107. Which is the elementary Hindi course prescribed for Central Govt. employees?
a. Prabodh
108. Who is the Chairman of Central Hindi Committee?
a. Prime Minister
109. According to Official Language Rules, under which region "Kerala" comes?
c. C
110. When was the Official Language Rules passed?
c. 1976
