



# RVUNL AEN & JEN

Civil Engineering

Mini Mock Challenge  
(July 30th - July 31st 2021)

Questions &  
Answer Key

1. The apparatus used for determining the Soundness of cement is
- A. Slump cone
  - B. Le Chatelier apparatus
  - C. Vicat's needle
  - D. UTM

Ans. B

2. Which of the following is not a non-destructive test?
- A. Rebound Hammer Test
  - B. Surface Hardness Test
  - C. Ultrasonic Pulse Velocity Test
  - D. Soundness Test

Ans. D

3. After 24 hours immersion in cold water, water absorption by weight shall not exceed \_\_\_\_\_ percent of the dry weight of the brick?
- A. 40
  - B. 20
  - C. 25
  - D. 30

Ans. B

4. Brick earth contains major quantity of
- A. Silica
  - B. Aluminium
  - C. Calcium
  - D. Magnesium

Ans. A

5. Acoustics of an auditorium is considered to be excellent when its reverberation time is between
- A. 0.50 and 1.50 s
  - B. 1.50 and 2.00 s
  - C. 2.00 and 3.00 s
  - D. 3.00 and 5.00 s

Ans. A

6. In PERT analysis, the time estimates of activities and probability of their occurrence follow
- A. Normal distribution curve
  - B. Poisson's distribution curve
  - C. Beta distribution curve
  - D. None of the above

Ans. C

7. For stability of floating bodies, the meta-centre should be?
- A. above the centre of buoyancy
  - B. below the centre of gravity
  - C. below the centre of buoyancy
  - D. above the centre of gravity

Ans. D

8. If a venturimeter having pipe diameter to throat diameter ratio 2:1 has a difference of head observed as 50 cm when observed in an inverted u-tube manometer filled with liquid having density of 12.6 g/cc. If the head loss occurred in the section is 1.4 m find the coefficient of discharge of the venturimeter.
- A. 0.875
  - B. 0.91
  - C. 0.88
  - D. 0.97

Ans. C



16. If E is the modulus of elasticity and I is the moment of inertia, then the flexural rigidity or flexural stiffness of the member is

- A.  $\frac{E}{I}$
- B. EI
- C.  $\frac{I}{E}$
- D. EI<sup>2</sup>

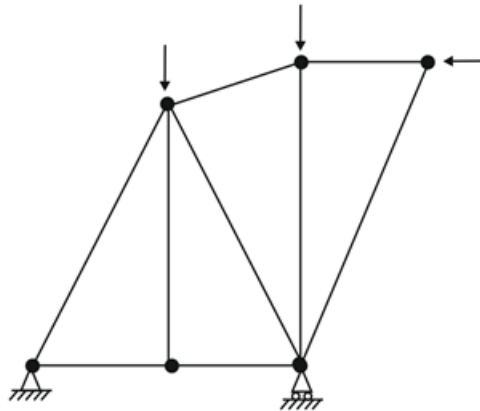
Ans. B

17. If E is young' modulus and I is moment of inertia, then the expression  $EI \frac{d^3y}{dx^3}$  at any section for a beam is equal to

- A. load intensity at the section
- B. shear force at the section
- C. bending moment at the section
- D. slope at the section

Ans. B

18. The truss shown below is an example of which of the following?



- A. Perfect frame
- B. Redundant Frame
- C. Deficient Frame
- D. Data Insufficient

Ans. A

19. A two hinged semi-circular arch is subjected to concentrated loads P and 2P respectively at two points radius vectors to which make angle 30° and 45° with the horizontal. Value of horizontal thrust is given by:

- A.  $0.5 \frac{P}{\pi}$
- B.  $\frac{P}{\pi}$
- C.  $1.25 \frac{P}{\pi}$
- D.  $1.5 \frac{P}{\pi}$

Ans. C

20. A soil profile is shown in figure below. If a uniformly distributed load of 54 kN/m<sup>2</sup> is applied at the ground surface and the clay is normally consolidated, then the settlement of the clay layer caused due to primary consolidation is. [Take  $Y_w = 10 \text{ kN/m}^2$ ]

**JE Foundation**  
**A Civil Engineering Course**

**START FREE TRIAL**



24. The units in which both sedimentation & digestion process of sludge take places simultaneously is
- A. skimming tank
  - B. imhoff tank
  - C. detritus tank
  - D. digestion tank

Ans. B

25. A reinforced cantilever beam of span 4 m. has cross-section of 150x500 mm. if checked for lateral stability and deflection, the beam will
- A. Fail in deflection only
  - B. fail in lateral stability only
  - C. fail in both deflection and later stability
  - D. satisfy the requirements of deflection and lateral stability

Ans. C

26. The limiting tensile percentage reinforcement,  $p_t$ , in WSM for a singly reinforced balanced rectangular section is \_\_\_\_ .
- [Take M20 grade concrete and Fe415 grade steel]
- A. 0.54
  - B. 0.44
  - C. 0.24
  - D. 0.34

Ans. B

27. The value of maximum effective slenderness ratio for a steel member carrying compressive loads resulting from dead loads and live loads is
- A. 200
  - B. 180
  - C. 150
  - D. 300

Ans. B

28. When two plates are placed end to end and are joined by two cover plates, the joint is known as \_\_\_\_\_.
- A. lap joint
  - B. butt joint
  - C. chain riveted lap joint
  - D. double cover butt joint

Ans. D

29. The value of the property (without being dismantled) at the end of the useful life period is known as \_\_\_\_\_.
- A. Scrap value
  - B. Salvation value
  - C. Junk value
  - D. Book value

Ans. B

30. An axonometric drawing which has all three axes divided by equal angles is:
- A. Dimetric
  - B. Trimetric
  - C. Orthographic
  - D. Isometric

Ans. D

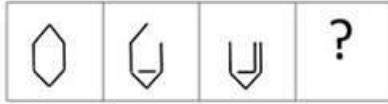
31. In the following question, select the related word from the given alternatives.

Farmer : Field : : Painter : ?

- A. Gallery
- B. Stage
- C. Theatre
- D. Shop

Ans. A

32. In the following pattern of figures, find the next number?



- A. 
- B. 
- C. 
- D. 

Ans. A

33. Shalini walked 15m towards south, took a right turn and walked 3m. She took a right turn again and walked 15m before stopping. Which direction did Shalini face after stopping?

- A. West
- B. South
- C. East
- D. North
- E. cannot be determined

Ans. D

34. In the following question, select the word which cannot be formed using the letters of the given word.

IMPRISONMENT

- A. PRISON
- B. SONNET
- C. IMPRESSION
- D. MOMENT

Ans. C

35. The Indian Parliament was attacked by terrorists in which of the following year?

- A. 2000
- B. 2001
- C. 2002
- D. 2003

Ans. B

36. What is the modern name of Drishadvati river (rig Vedic)?

- A. Saraswati
- B. Krumu
- C. Ghagghar
- D. Gomal

Ans. C





44. For the safety of women while travelling "Vasundhara Sakhi Mahila Vahan" is launched. It is related to which vehicle?

- A. Bus
- B. Auto
- C. E-rickshaw
- D. Cycle

Ans. C

45. Tilwara, a Mesolithic site, is situated on the bank of which river?

- A. Saraswati
- B. Ghaghhar
- C. Luni
- D. Bhogavo

Ans. C

46. 'Battle of Sarangpur' was fought in which year?

- A. 1438
- B. 1436
- C. 1439
- D. 1437

Ans. D

47. Who established the city "Udaipur"?

- A. Udai Singh
- B. Rana Vikramaditya
- C. Rana Pratap
- D. None of these

Ans. A

48. The Battle of Haldighati was a battle fought on-

- A. 18 June 1576
- B. 18 June 1577
- C. 18 June 1578
- D. 18 June 1579

Ans. A

49. Match the following.

List – I

DAMS

- 1) Rana Pratap Sagar Dam
- 2) Mahi Bajaj Dam
- 3) Bisalpur Dam
- 4) Jawai Dam

List – II

CHARACTERISTICS

- A) Built by Maharaja Umaid Singh
  - B) the major source of drinking water supply to Jaipur
  - C) the Second Dam of Chambal Valley Project
  - D) Second Largest Dam of Rajasthan
- A. 1-A; 2-B; 3-C; 4-D
  - B. 1-C; 2-D; 3-B; 4-A
  - C. 1-D; 2-B; 3-C; 4-A
  - D. 1-B; 2-C; 3-D; 4-A

Ans. B

**JE Foundation**  
**A Civil Engineering Course**

**START FREE TRIAL**

50. Rajasthan's first biogas CNG plant is opened in which of the following district recently?

- A. Bhilwara
- B. Banswara
- C. Pratapgarh
- D. Chittorgarh

Ans. A

51. Loamy soil is Important for which crops?

- A. Cotton and cash crops
- B. Tobacco
- C. Bajra
- D. None of above

Ans. C

52. When was the ordinance on Rajasthan State Public Commission promulgated?

- A. 16th August,1949
- B. 17th August,1949
- C. 18th August,1949
- D. 19th August,1949

Ans. A

53. Where would be the headquarter of Maharana Pratap battalion which was recently approved by the home ministry?

- A. Udaipur
- B. Jhalawar
- C. Pratapgarh
- D. Rajsamand

Ans. C

54. Which is known as the lifeline of a Bikaner city?

- A. Kunwar Sen lift Canal
- B. Indira Gandhi Canal
- C. Rajiv Gandhi Lift Canal
- D. None of these

Ans. A

55. What do you mean by valence number?

- A. No. of electros in the innermost shell of an atom.
- B. No. of electrons an atom can accommodate
- C. No. of electron in the outer most shell of an atom.
- D. No. of protons an atom can accommodate

Ans. C

56. Consider the following statements:

- i. There are three types of combinations, resistances could be arranged.
- ii. Series combination is one such type.

Which of the above statements are correct?

- A. Only i.
- B. Only ii.
- C. Both i and ii.
- D. Neither i nor ii.

Ans. B

57. The time taken by sunlight to reach the Earth is

- A. 8 mins 20 seconds
- B. Less than a second
- C. 24 hours
- D. 365 days

Ans. A

58. Which of the following is the reproducing part of ginger?

- A. Leaf  
B. Root  
C. Stem  
D. Seed

Ans. C

59. If  $a - b : b - c : c - d = 1 : 2 : 3$ , then what is the value of  $(a + d) : c$ ?

- A. 1 : 2  
B. 2 : 1  
C. 4 : 1  
D. 3 : 1

Ans. B

60. By selling 64 apples for Rs. 60 a person gains 25%. In order to have 40% loss, how many apples shall he sell for RS 36?

- A. 80  
B. 70  
C. 60  
D. 50

Ans. A

61. In a examination, 54% of the candidate passed in science and 42% failed in mathematics. If 32% failed in both subjects, what percentage passed in both subjects?

- A. 56%  
B. 48%  
C. 32%  
D. 44%

Ans. D

62. If an airplane travels 980 km in 35 min, then how much time it will take in travelling 1470 km?

- A.  $1\frac{1}{8}$  hr  
B.  $\frac{1}{2}$  hr  
C.  $\frac{7}{8}$  hr  
D.  $1\frac{1}{6}$  hr

Ans. C

63. आकारांत स्त्रीलिंग एकवचन संज्ञा-शब्दों के अन्त में 'एँ' लगाने से बना बहुवचन शब्द निम्न में से कौन-सा है?

- A. तिथियाँ  
B. गतियाँ  
C. माताएँ  
D. जातियाँ

Ans. C

64. हरिश्चंद्र शब्द का निम्न में से कौन सा सही संधि विच्छेद है?

- A. हरीश + चंद्र  
B. हरि : + चंद्र  
C. हरिश् + चन्द्र  
D. हरि + शचंद्र

Ans. B

65. "वीर" का स्त्रीलिंग शब्द क्या है?

- A. विरावती  
B. वीरांगना  
C. वारांगना  
D. विरांगना

Ans. B

66. स्वर्गगत निम्नलिखित में से कौन सा समास है।

- A. कर्म तत्पुरुष  
B. करण तत्पुरुष  
C. अधिकरण तत्पुरुष  
D. इनमें से कोई नहीं

Ans. A

67. **Direction:** Answer the following questions by selecting the correct/most appropriate options.

While reading for comprehension, we understand that some pairs are examples of homograph. Which one of the following is a homograph?

- A. lead [metal]/lead [give direction]  
B. lead [give direction]/dead [mortal]  
C. mail[post]/male[gender]  
D. warm/tepid [being neither too hot nor too cold]

Ans. A

68. Fill in the blank with the appropriate word:

She entered the school in the \_\_\_\_\_ part of the semester.

- A. Latter  
B. Late  
C. Later  
D. Lately

Ans. C

69. Complete the following sentence by choosing the appropriate word from the given options:

The municipal corporation was unable to give a valid reason for the \_\_\_\_\_ drains.

- A. overflowing  
B. beautiful  
C. clean  
D. well-maintained

Ans. A

70. Choose the correct option:

- A. Hunger is the good sauce.  
B. Hunger is the better sauce.  
C. Hunger is the best sauce.  
D. Hunger is the more good sauce.

Ans. C

\*\*\*