

Discipline: CIVIL ENGINEERING

(Faculty of Engineering & Technology)

Roll No. _____ Date: _____ Signature of the Candidate _____

Q1 The property by which a body returns to its original shape after removal of the force, is called

- (a) Plasticity (b) Elasticity (c) Ductility (d) Malleability

Q2 Maximum deflection of a cantilever due to pure bending moment M at its free end, is

- (a) $\frac{ML^2}{3EI}$ (b) $\frac{ML^2}{4EI}$ (c) $\frac{ML^2}{6EI}$ (d) $\frac{ML^2}{2EI}$

Q3 The sum of normal stress is

- (a) constant (b) variable
(c) dependent on the planes (d) none of above

Q4 The effective length of a battened column is increased by

- (a) 5% (b) 10% (c) 15% (d) 20%

Q5 The moment which makes all the fibres at the section to yield is known as

- (a) flexural rigidity (b) moment of resistance
(c) plastic moment capacity (d) yield moment

Q6 The moment of inertia of a triangular section (height h, base b) about its base is

- (a) $\frac{bh^2}{12}$ (b) $\frac{b^3h}{12}$ (c) $\frac{b^2h}{12}$ (d) $\frac{bh^3}{12}$

Q7 The nominal thickness of an expansion joint in brick wall, is kept more than

- (a) 5 mm (b) 10 mm (c) 15 mm (d) 20 mm

Q8 For a good building stone, its specific gravity should be greater than

- (a) 1.7 (b) 1.5 (c) 2.2 (d) 2.7

Q9 As per IS 15658 : 2006 the water absorption by mass in individual samples should be restricted to

- (a) 5% (b) 7% (c) 10% (d) 15%

Q10 A ordinary portland cement when tested for its fineness, should not leave any residue on IS Sieve no.9 more than

- (a) 20% (b) 5% (c) 15% (d) 10%

Q11 The horizontal members of panelled doors are known as

- (a) styles (b) rails (c) ledges (d) bracings

Q12 The reading taken from an instrument station on a benchmark of 100.00 RL is 1.2 and the reading taken on next station is 1.70. Then RL of next station is

- (a) 99.50 (b) 98.30 (c) 98.80 (d) 100.50

Q13 If whole circle bearing of line is 120° , its reduced bearing is

- (a) S 20° E (b) S 60° E (c) N 120° E (d) N 60° E

Q14 Garnett's diagram are used for graphical solution of design equation of a canal by

- (a) Lacey's theory (b) Kennedy's theory
(c) Gibb's theory (d) Lindlay theory

Q15 Precipitation includes

- (a) Rain (b) Snow (c) Hail (d) All

Q16 Military organization is known as

- (a) Line organization (b) Line & staff organization
(c) Functional (d) None of above

Q17 Bureau of Indian Standard has divided India into _____ number of earthquake zones

- (a) 4 (b) 5 (c) 6 (d) 7

Q18 Suitable foundation for steel columns is

- (a) Mat foundation (b) Combined foundation
(c) Strap footing (d) Grillage footing

Q19 Gantry girders are designed to resist

- (a) vertical load from cranes (b) longitudinal and vertical loads
(c) lateral, longitudinal and vertical loads (d) lateral and longitudinal loads

Q20 If the height of the first storey of a building is 3.2 m and riser is 13 cm, the number of treads required is

- (a) 24 (b) 12 (c) 28 (d) 32

Q21 The percentage of minimum HYSD steel reinforcement of the total cross sectional area in slabs, is

- (a) 0.10% (b) 0.12% (c) 0.18% (d) 0.20%

Q22 The maximum permissible slenderness ratio of compression member carrying dead and superimposed load is

- (a) 180 (b) 200 (c) 250 (d) 300

Q23 Upto a height of _____ wind pressure on a structure is considered to be uniform.

- (a) 20 m (b) 30 m (c) 40 m (d) 50 m

Q24 Poise is the unit of

- (a) Viscosity (b) Mass density
(c) Velocity Gradient (d) Kinematic Viscous

Q25 The maximum thickness of boundary layer in a pipe of radius r is

- (a) 0 (b) $r/2$ (c) r (d) $2r$

Q26 1 stoke is equal to

- (a) $1 \text{ m}^2/\text{sec}$ (b) $1 \times 10^{-2} \text{ m}^2/\text{sec}$
(c) $1 \times 10^{-3} \text{ m}^2/\text{sec}$ (d) $1 \times 10^{-4} \text{ m}^2/\text{sec}$

Q27 the stress strain relation of the newtonian fluid is

- (a) parabolic (b) inverse type
(c) hyperbolic (d) linear

Q28 If the coefficient of friction on the road surface is 0.15 and a maximum super elevation 1 in 15 is provided the maximum speed of vehicles on a curve of 100 m radius is

- (a) 32.44 km/h (b) 42.44 km/h (c) 52.44 km/h (d) 62.44 km/h

Q29 Width of the shoulders of carriage way is generally kept

- (a) 125 cm (b) 150 cm (c) 250 cm (d) 350 cm

Q30 Rail joint supported on a single sleeper, is known

- (a) Supported rail joint (b) suspended rail joint (c) square rail joint (d) Bridge rail joint

Q31 If the cross slope of terrain is 15, it is classified as

- (a) plain (b) rolling (c) mountainous (d) steep

Q32 A Pycnometer is used to determine

- (a) Voids ratio (b) Dry density
(c) Density index (d) Water content

Q33 A saturated soil sample as water content of 40% and specific gravity of soil particle 2.7. The void ratio of soil is

- (a) 0.52 (b) 0.40 (c) 1.08 (d) 0.32

Q34 The maximum water content at which a reduction in water content does not cause a decrease in volume of soil mass is known

- (a) Liquid limit (b) Plastic limit
(c) Permeability limit (d) Shrinkage limit

Q35 Uniformity coefficient of a soil is

- (a) Always less than 1 (b) Always Equal to 1
(c) Equal to or less than 1 (d) Equal to or greater than 1

Q36 The amount of oxygen consumed by the aerobic bacteria which cause the aerobic biological decomposition of sewage is known

- (a) BOD (b) DO (c) COD (d) All

Q37 Fresh sewage is generally

- (a) Alkaline (b) Acidic
(c) Highly decomposed (d) objectionable odour

Q38 The pathogenes can be killed by

- (a) nitrification (b) chlorination (c) oxidation (d) none of the above

Q39 The most commonly used sewer under culverts is

- (a) Circular brick sewer (b) Circular cast iron sewer
(c) Semi elliptical sewer (d) horse shoe type sewer

Q40 When Sodium-Absorption Ratio (SAR) is 30, it is called

- (a) low sodium water (b) medium sodium water
(c) high sodium water (d) very high sodium water

Civil

Answer Key PET DEC 2018

| Q | Ans | Q | Ans |
|----|-----|----|-----|
| 1 | b | 21 | b |
| 2 | d | 22 | a |
| 3 | a | 23 | b |
| 4 | b | 24 | a |
| 5 | c | 25 | c |
| 6 | d | 26 | d |
| 7 | d | 27 | d |
| 8 | d | 28 | c |
| 9 | b | 29 | c |
| 10 | d | 30 | a |
| 11 | b | 31 | b |
| 12 | a | 32 | d |
| 13 | b | 33 | c |
| 14 | b | 34 | d |
| 15 | d | 35 | d |
| 16 | a | 36 | b |
| 17 | a | 37 | a |
| 18 | d | 38 | b |
| 19 | c | 39 | a |
| 20 | a | 40 | d |