EVEREXAM
Learn More, Earn More

SSC JE MAINS

(CONVENTIONAL)

TEST SERIES 2020

- Total Test - 8 Tests
- Validity - Till The Exam
- Start Date - 20 June 2021

At Just 799/-

Enroll Now

TELEGRAM CHANNEL EVEREXAM TECH

DOWNLOAD EVEREXAM APP

EVEREXAM INDIA'S BEST PLATFORM FOR CIVIL ENGINEERING

HURRY UP!

TARGET DFCCIL
THEORY BATCH

- Start Date 1 June 2021
- Duration 400+hours
- Validity 5 Months
- Free Question Practice Batch

~~₹1501/-~~
₹501 Only

SSC JE PRE 2021
CIVIL ENGINEERING

- Start Date 15 June 2021
- Duration 400+hours
- Validity 6 Months

~~₹1799/-~~
₹555 Only

HURRY UP!

Limited Time Offer

TELEGRAM CHANNEL EVEREXAM TECH | DOWNLOAD EVEREXAM APP | 8595517959 | www.everexam.org

SSC JE PRE 2021

RECORDED BATCH

- ENROLL - TODAY
- VALIDITY - 5 MONTHS
- DURATION - 300+ HOURS
- LIMITED OFFER

सत्यमेव जयते
STAFF SELECTION COMMISSION
कर्मचारी चयन आयोग
भारत सरकार

At Just
550/-

EVEREXAM TECH

www.everexam.org

8595517959

Heartiest *Congratulations* To All Selected Candidates From EverExam

Maneesh Kumar
CPWD - 2018

Vaibhav Gupta
CPWD - 2018

Mehefuz Hossain
CPWD - 2018

Pooja Garg
CWC - 2018

Gaurvendra Singh
CWC - 2018

Kunal Panchal
MES - 2018

Satyam Gupta
BRO - 2018

Gaurav Pandey
BRO - 2018

Rajbhadur Prajapati
BRO - 2018

Suman Shankar
BRO - 2018

Many More....

60+ Selection In Civil SSC JE 2018

TELEGRAM CHANNEL EVEREXAM TECH | DOWNLOAD EVEREXAM APP GET IT ON Google Play

Everexam
Learn More, Earn More
SSC JE MAINS 2020
STARTING
13 APRIL
VALIDITY
5 MONTHS
LIVE
ONLINE CLASSES
FEE @ 2999/-
WITH
FREE TEST SERIES
ANY QUERIES JUST CALL NOW
8595517959
Install Everexam App Now
GET IT ON
Google Play

EVEREXAM
Learn More, Earn More

FOUNDATION BATCH 2021

ALL STATE AE/JE EXAMINATION

(THEORY) QUESTIONS PRACTICE BATCH

VALIDITY 1 YEAR

DURATION 400+HOURS

STARTING 15 APRIL 2021

~~FEE 9997/-~~

FEE 3199/-

ANY QUERIES JUST CALL NOW 8595517959

Install Everexam App Now

GET IT ON Google Play

RAJASTHAN JE

QUESTIONS PRACTICE BATCH

- Starting 20 April 2021
- Duration 100 Hours
- Validity 4 Months

Fee @ 399/-

RAJASTHAN JE

THEORY CLASSES

- Recorded Class
- Duration 250 Hours
- Validity 4 Months

Fee @ 1498/-

ANY QUERIES JUST CALL NOW 8595517959

Install Everexam App Now

GET IT ON Google Play

Q : 1) Consider the following unit process commonly used in water treatment; Rapid Mixing (RM), Flocculation (F), Primary sedimentation (PS), Secondary sedimentation (SS)m Chlorination (C), and rapid sand filtration (RSF). The order of these unit processes (first to last) in conventional water treatment plant is:

A : PS → RSF → F → RM → SS → C

B : PS → F → RM → RSF → SS → C

C : PS → F → SS → RSF → RM → C

D : PS → RM → F → SS → RSF → C

Q : 2) Match List-I with List-II and select the correct answer using the codes given below the lists:

List-I (Bacteria)	List-II (process)
A. Optimum quantity of alum is determined by	1. Winkler test method
B. Zero hardness of water is achiever by	2. Jar test method
C. Dissolved oxygen Is determined by	3. Ion-exchange treatment method
D. Sewage treatment in an oxidation pond is accomplished by	4. Algal-bacterial symbiosis method

Codes:

A: 1, 2, 4, 3

B: 2, 3, 1, 4

C: 4, 3, 2, 1

D: 1, 3, 2, 4

Q : 3) A grit chamber of dimension 12 m × 1.5 m × 0.8 m liquid depth has a flow of 720 m^3/hour. The surface loading rate and detention time of the grit chamber would be respectively:

A: 4000 m^3/hour/m^2 and 1.2 minutes

B: 40000 litres/m^2 and 1.2 minutes

C: 40 m^3/hour/m^2 and 12 minutes

D: 40000 litres/m^2/hr and 1.2 minutes

Q : 4) A certain waste has a BOD of 162 mg/L and its flow is 1000 m^3/day. If the domestic sewage has a BOD of 80g/capita, then the population equivalent of the waste would be:

A: 2025

B: 1296

C: 1260

D: 150

Q : 5) Match List-I with List-II and select the correct answer using the codes given below the lists:

List-I (Air pollutant)	List-II (Environmental effect)
A. Carbon monoxide	1. Respiratory distress for living beings
B. Particulate matter	2. Chemical reaction with hemoglobin in blood
C. Nitrogen oxides	3. Reduction in visibility and aeroallergens carries
D. Sulphur dioxide	4. Photochemical smog in atmosphere

Codes:

A: 2, 3, 1, 4

B: 3, 2, 4, 1

C: 2, 3, 4, 1

D: 3, 2, 1, 4

Q : 6) Two footings, one circular and the other strip, are founded on the surface of a purely cohesionless soil, Diameter of the circular footing and width of strip footing is same. Then, the ratio of ultimate bearing capacity of circular to strip footing is:

A: 0.75

B: 0.60

C: 1.20

D: 1.33

Q : 7) If a soil is having liquid limit of 65% and plasticity index of 50%, the soil can be classified as:

A: 0.75

B: 0.60

C: 1.20

D: 1.33

Q : 8) Which of the following is true?

A: The large the coefficient of consolidation, the longer it takes for consolidation to occur

B: Pore pressure parameter A is a constant for a soil

C: A saturated loose sand sample reduces in volume when sheared under undrained conditions

D: Saturated sand can exhibit an angle of shearing resistance of zero

Q : 9) Study the statements listed below:

1. Area ratio should be low
2. Cutting edge should be thick
3. Outside clearance should be low

Which of these statements is/are correct for a good quality soil samples?

A: 1 and 2

B: 1 and 3

C: 2 and 3

D: Only 1

Q : 10) A group of nine piles 12 m long and 250 mm in diameter is arranged in a square form in clay having undrained shear strength of 30 kN/m. Neglecting bearing at tip of the piles and taking adhesion factor as 0.9, ultimate capacity of all piles in individual action is:

A: 2045 kN

B: 2290 kN

C: 2545 kN

D: 2690 kN

Q : 11) If the unit weight (γ) of sand and clay samples are increased by 10% which of the following is true?

A: More volume reduction occurs in sand

B: More volume reduction occurs in clay

C: Equal volume reduction in sand and clay

D: Volume reduction is independent of γ

Q : 12) Which of the following can be considered as quick clay?

A: Sensitivity = 0

B: Sensitivity = 1

C: Sensitivity = 100

D: Sensitivity = ∞

Q : 13) The permeability of coarse grained soil depends on:

A: Effective size particle

B: Mean size particle

C: Coefficient of uniformity (C_u)

D: Coefficient of curvature (C_c)

Q : 14) Match the field equipment drum roller (K), Rubber tire roller (L), sheep foot roller (M), vibratory roller (N) with corresponding laboratory equipment vibratory compaction (P), impact compaction (Q), Kneading compaction (R), Static compaction (S):

A: K-S; L-R; M-Q; N-P

B: K-S; L-Q; M-R; N-P

C: K-R; L-S; M-Q; N-P

D: K-R; L-Q; M-S; N-P

Q : 15) Which option matches List-I with List-II correctly from the given codes?

Soil Type	Characteristic
A. Olitic sand	1. Under-consolidated
B. Biogenetic sand	2. Rounded
C. Calcareous clay	3. Cemented
D. Soft clay	4. Crushing

Codes:

A: 2, 4, 3, 1

B: 2, 1, 3, 4

C: 2, 1, 4, 3

D: 2, 3, 4, 1

Q : 16) If water table is high in stiff clay, which of the following stabilizing method should be followed?

A: Bore hole be kept full of water to a level higher than ground water table

B: Bore hole be kept full of drilling mud to a level higher than ground water table

C: Bore hole be cased with pipe casing

D: Nothing needs to be done

Q : 17) For two-dimensional flow through a constant head permeameter, the flow net will alter if:

A: Soil in the permeameter is altered

B: Head causing flow is altered

C: Flow direction is reversed

D: Permeameter length if changed

Q : 18) The permeability of sand in horizontal and vertical directions are 3×10^{-3} cm/sec and 1×10^{-3} cm/sec and the permeability of clay in horizontal and vertical directions are 9×10^{-7} cm/sec and 3×10^{-9} cm/sec, then the ratio of seepage loss per meter length of dam in sand to clay is:

A: $\frac{1}{3}$

B: 3

C: $\frac{1}{9}$

D: 9

Q : 19) The normal stress and shear stress at failure on the failure plane are 10 kPa and 4 kPa respectively, then the angle of internal friction of the soil and the angle of the internal friction of the soil and the angle of the inclination of the failure plane to the major principal plane are _____ , _____.

A: 21°48', 55°54'

B: 55°54, 21°48'

C: 10°54', 50°27'

D: 50°27', 10°54'

Q : 20) A normally consolidated clayey soil failure under a major principal stress of 300 kPa with a corresponding minor principal stress of 100 kPa. If, for the same soil, the minor principal stress had been 200 kPa, the major principal stress $\phi = 30^{o}$ will be:

A: 300 kPa

B: 400 kPa

C: 600 kPa

D: 900 kPa

Q : 21) In a triaxial shear test conducted on a soil sample is having cohesion of 12 kPa and the angle of shearing resistance of 36°, if the cell pressure is 200 kPa, the deviator stress at failure will be:

A: 617.5 kPa

B: 817.5 kPa

C: 770.37 kPa

D: 47.1 kPa

Q : 22) If a sample of clay has a cohesive strength of 80 kPa and an angle of shearing resistance of 10^{o}, the shear strength of clay at a normal stress of 100 kPa will be:

A: 97.63 kPa

B: 98.48 kPa

C: 78.78 kPa

D: 95.34 kPa

Q : 23) Drainage is not permitted during application of cell pressure (before application of deviator stress) in:

1. Unconsolidated undrained test
2. Consolidated undrained test
3. Consolidated drained test

Out of these statements:

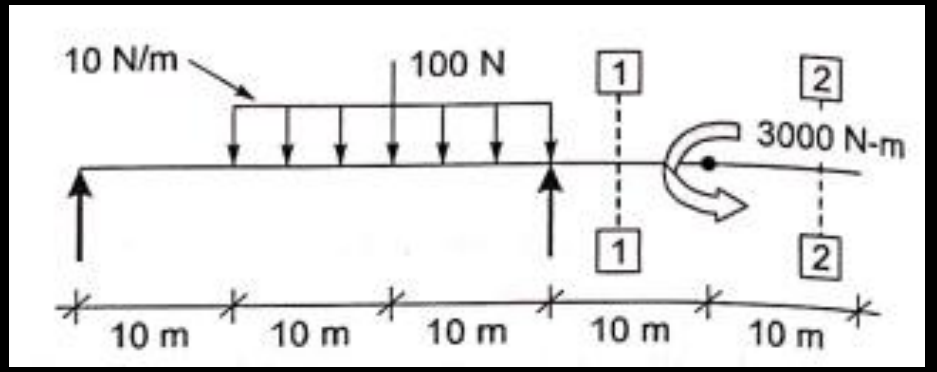
A: 1 and 2 are correct

B: 1 and 3 are correct

C: 2 and 3 are correct

D: Only 1 is correct

Q : 24) For the beam shown in figure, bending moment at section 1-1 and 2-2 respectively are:



A: +3000 N-m, -3000 N-m

B: -3000 N-m, 0

C: -3000 N-m, +3000 N-m

D: +3000 N-m

Q : 25) Ductility depends on:

(i) Temperature of the structure

(ii) Size of the structure

(iii) Applied loading time

Which of the above is/are true?

A: (i) and (iii)

B: (i) and (ii)

C: (i) only

D: All of these

Q : 26) For a beam having cross-section as T, which is a correct statement?

A: Shear stress variation is parabolic below neutral axis and normal stress is linear below Neutral axis.

B: Shear stress variation is linear and normal stress is parabolic below neutral axis.

C: Both shear and normal stresses are linear along the cross-section.

D: Both shear and normal stresses are parabolic along the cross-section.

Q : 27) The ratio of modulus of rigidity and modulus of elasticity (G/E) for any elastic isotropic material is:

A: Less than $\frac{1}{2}$

B: Less than $\frac{1}{3}$

C: More than $\frac{1}{3}$

D: Both (a) and (c)

Q : 28) Which quantity will not be zero for a plane strain problem in x-y plane?

A: Shear strain in x-z plane

B: Normal strain in z direction

C: Normal stress in z direction

D: Shear stress in y-z plane

Q : 29) If E, G, K and μ represent the elastic modulus, shear modulus, bulk modulus and Poisson's ratio respectively of a linear elastic, isotropic and homogeneous material, and if you need to express the stress-strain relationships completely for this material, at least:

A: All the four must be known

B: E, G and μ must be known

C: E, K and μ must be known

D: Any two of the four must be known

Q : 30) The displacement δ_i in line with force F_i is given by:

A: First derivative of total energy with respect to F_i

B: First derivative of potential energy with respect to F_i

C: First derivative of internal energy with respect to F_i

D: First derivative of complementary energy with respect to F_i

Heartiest *Congratulations* To All Selected Candidates From EverExam

ALL STATE JE /AE RESULT

Ajay Kumar
GPSC - AE

Abdul
WBPSC-JE

Manoj
RRB JE BHOPAL

Vaibhav
RRB JE PATNA

Amerndra
RRB JE KOLKATA

Deepak
RRB JE ALLAHABAD

Satyam Gupta
UPPSC AE

Gaurvendra
RRB JE ALLAHABAD

Vicky
RRB JE BANGALORE

Thakur Das
RRB JE AJMER

Praveen
RRB JE CHENNAI

Shubham
RRB JE GUWAHATI

Ujjal
RRB JE KOLKATA

Manish
BHOPAL AAI

TELEGRAM CHANNEL EVEREXAM TECH | DOWNLOAD EVEREXAM APP