



Participant ID	
Participant Name	
Test Center Name	
Test Date	29/09/2024
Test Time	1:30 PM - 3:30 PM
Subject	Junior Engineering Assistant IV Electrical

Section : Subject Knowledge

Q.1 Select the most appropriate statement regarding FETs and MOSFETs.

Ans A. FETs and MOSFETs have low input impedance.

B. The operating Transfer characteristics of N-channel Enhancement type MOSFET is same as N-channel Depletion type MOSFET.

C. An N-channel FET operates with respect to variation in the negative gate to source voltage.

D. FET amplifier provides very high voltage gain, much greater than 100.

Question ID : 6306801004838

Option 1 ID : 6306803943209

Option 2 ID : 6306803943211

Option 3 ID : 6306803943212

Option 4 ID : 6306803943210

Status : Answered

Chosen Option : D

Q.2 An R-C series AC circuit has resistance of 15Ω and capacitive reactance (X_C) of 15Ω .

If it is connected to an AC voltage source, the phase angle between voltage and current will be:

Ans A. 30°

B. 90°

C. 0°

D. 45°

Question ID : 630680383100

Option 1 ID : 6306801493308

Option 2 ID : 6306801493310

Option 3 ID : 6306801493307

Option 4 ID : 6306801493309

Status : Answered

Chosen Option : D

Q.3 In which of the following applications, the impregnated fibrous material is used in the form of tape?

Ans A. Panel boards

B. Circuit breakers

C. Switch boards

D. Joining the cables

Question ID : 630680376447

Option 1 ID : 6306801466856

Option 2 ID : 6306801466855

Option 3 ID : 6306801466857

Option 4 ID : 6306801466858

Status : Answered

Chosen Option : D

Q.4 In basic slide wire potentiometer, the working current through the _____ is varied by changing the rheostat setting.

- Ans A. slide wire
 B. slide contact
 C. resistor
 D. galvanometer

Question ID : 630680195081
Option 1 ID : 630680756813
Option 2 ID : 630680756815
Option 3 ID : 630680756816
Option 4 ID : 630680756814
Status : Answered
Chosen Option : A

Q.5 Which factor primarily affects the efficiency of a synchronous generator in addition to core and copper losses?

- Ans A. The type of cooling system
 B. The speed of the generator's rotor
 C. The ambient temperature surrounding the generator
 D. The power factor of the load

Question ID : 6306801007694
Option 1 ID : 6306803954446
Option 2 ID : 6306803954445
Option 3 ID : 6306803954444
Option 4 ID : 6306803954443
Status : Answered
Chosen Option : D

Q.6 What adjustment is made to the photometer head during the measurement process?

- Ans A. It is moved between the two light sources until the illumination on both sides is equal.
 B. It is elevated to a specific height.
 C. It is tilted to match the angle of the light sources.
 D. It is rotated in a horizontal plane.

Question ID : 6306801029992
Option 1 ID : 6306804042664
Option 2 ID : 6306804042665
Option 3 ID : 6306804042666
Option 4 ID : 6306804042663
Status : Answered
Chosen Option : A

Q.7 Which of the following tabs in the Menu bar provides Spelling and Grammar check, Thesaurus, Word Count, Comments and Tracking options for documents in Microsoft Word?

- Ans A. Review
 B. View
 C. References
 D. Design

Question ID : 630680764257
Option 1 ID : 6306802995602
Option 2 ID : 6306802995601
Option 3 ID : 6306802995599
Option 4 ID : 6306802995600
Status : Answered
Chosen Option : A

Q.8 What is the primary reason for protecting a thyristor against high di/dt during turn-on?

- Ans A. To reduce the leakage current in the forward blocking state
 B. To prevent voltage drop across the device
 C. To avoid localised hot spot heating and potential device failure
 D. To ensure proper gate drive voltage

Question ID : 6306801007646
Option 1 ID : 6306803954254
Option 2 ID : 6306803954251
Option 3 ID : 6306803954252
Option 4 ID : 6306803954253
Status : Answered
Chosen Option : C

Q.9 Which of the following documents is typically included in a detailed estimate for a project?

- Ans A. Marketing analysis
 B. Sales forecast
 C. Customer feedback
 D. Specification

Question ID : 6306801005348
Option 1 ID : 6306803945228
Option 2 ID : 6306803945230
Option 3 ID : 6306803945231
Option 4 ID : 6306803945229
Status : Answered
Chosen Option : D

Q.10 Parabolic reflectors are used in:

- Ans A. flat plate collectors
 B. line focusing collectors
 C. typical air
 D. typical liquid collectors

Question ID : 6306801016595
Option 1 ID : 6306803989929
Option 2 ID : 6306803989926
Option 3 ID : 6306803989928
Option 4 ID : 6306803989927
Status : Answered
Chosen Option : B

Q.11 The function of the bleeder resistor in an inductor-capacitor (LC) filter output is

- Ans A. to stop the current passing through the choke
 B. to charge the capacitor
 C. to maintain a maximum current through the inductor
 D. to maintain a minimum current through the inductor

Question ID : 630680195580
Option 1 ID : 630680758789
Option 2 ID : 630680758792
Option 3 ID : 630680758790
Option 4 ID : 630680758791
Status : Answered
Chosen Option : D

Q.12 In case of class B commutation or resonant-pulse commutation with $L = 5 \mu\text{H}$ and $C = 20 \mu\text{F}$ with initial voltage across the capacitor (V_s) = 230 V, find the peak value of resonant current.

- Ans A. 260 A
 B. 360 A
 C. 460 A
 D. 560 A

Question ID : 630680352182
Option 1 ID : 6306801370828
Option 2 ID : 6306801370827
Option 3 ID : 6306801370826
Option 4 ID : 6306801370825
Status : Answered
Chosen Option : A

Q.13 How does the addition of halogen vapour in halogen lamps improve their performance?

- Ans A. It decreases the operating temperature.
 B. It initiates a regenerative cycle that restores evaporated tungsten back to the filament.
 C. It enhances the bulb's transparency.
 D. It increases the filament's resistance.

Question ID : 6306801030004
Option 1 ID : 6306804042714
Option 2 ID : 6306804042713
Option 3 ID : 6306804042712
Option 4 ID : 6306804042711
Status : Answered
Chosen Option : B

Q.14 Why is it necessary to assess the after-sales service arrangement and its cost during tender evaluation?

- Ans A. To evaluate the long-term cost and support for the product or service
 B. To verify the accuracy of the project specifications
 C. To confirm the tenderer's legal compliance
 D. To ensure the work is completed on time

Question ID : 6306801029431
Option 1 ID : 6306804040353
Option 2 ID : 6306804040352
Option 3 ID : 6306804040354
Option 4 ID : 6306804040351
Status : Answered
Chosen Option : A

Q.15 A parallel R-L-C circuit is working at its resonant frequency. Which of the following statements is/are correct keeping this context in mind?

- (a) Power factor of the circuit is zero.
(b) The current in the circuit is minimum.
(c) The impedance of the circuit is minimum.

- Ans A. Only (c) and (b)
 B. Only (a)
 C. Only (b)
 D. Only (a) and (b)

Question ID : 630680209186
Option 1 ID : 630680810960
Option 2 ID : 630680810961
Option 3 ID : 630680810962
Option 4 ID : 630680810959
Status : Answered
Chosen Option : C

Q.16 Kelvin Double bridge is used for the measurement of _____.

- Ans A. high resistance in the range of mega ohms
 B. low resistance less than 1 Ω
 C. medium resistance greater than 1 Ω
 D. resistance greater than 1K Ω

Question ID : 630680195065
Option 1 ID : 630680756752
Option 2 ID : 630680756749
Option 3 ID : 630680756750
Option 4 ID : 630680756751
Status : Answered
Chosen Option : B

Q.17 Which of the following statements is FALSE regarding SISO shift register?

- Ans A. The serial shifting method shifts one bit at a time.
 B. The data within the register may be shifted from left to right or right to left.
 C. To shift n-bit data, we need (n-1) clock pulses.
 D. SISO register can be designed using JK or D-flip flop.

Question ID : 630680405324
Option 1 ID : 6306801580555
Option 2 ID : 6306801580556
Option 3 ID : 6306801580557
Option 4 ID : 6306801580554
Status : Answered
Chosen Option : C

Q.18 Where are the tenders opened?

- Ans A. In the Chief Engineer's office
 B. In the project site office
 C. In the contractor's office
 D. In the office of the Superintendent Engineer (Purchase), Panchkula

Question ID : 6306801005307
Option 1 ID : 6306803945073
Option 2 ID : 6306803945075
Option 3 ID : 6306803945072
Option 4 ID : 6306803945074
Status : Answered
Chosen Option : D

Q.19 How can one get Slide Sorter view in MS PowerPoint?

- Ans
- A. Insert > Slide Sorter
 - B. Home > Layout
 - C. Design > Slide Sorter
 - D. View > Slide Sorter

Question ID : 6306801063892
 Option 1 ID : 6306804177916
 Option 2 ID : 6306804177915
 Option 3 ID : 6306804177918
 Option 4 ID : 6306804177917
 Status : Answered
 Chosen Option : D

Q.20 What is one advantage of mineral wool insulation compared to other insulation materials?

- Ans
- A. It doesn't require extra chemicals for fire resistance.
 - B. It is made from organic materials.
 - C. It is highly flammable.
 - D. It requires additional chemicals to be fire resistant.

Question ID : 6306801029983
 Option 1 ID : 6306804042628
 Option 2 ID : 6306804042630
 Option 3 ID : 6306804042629
 Option 4 ID : 6306804042627
 Status : Answered
 Chosen Option : A

Q.21 The correct phase sequence of a three-phase induction motor running in clockwise direction connected to a three-phase system is RYB. Which of the following phase sequences will keep the direction of motor unchanged?

- Ans
- A. YRB
 - B. RBY
 - C. YBR
 - D. BYR

Question ID : 630680334737
 Option 1 ID : 6306801302208
 Option 2 ID : 6306801302205
 Option 3 ID : 6306801302206
 Option 4 ID : 6306801302207
 Status : Answered
 Chosen Option : C

Q.22 Why is a higher load factor desirable in a power system?

- Ans
- A. It allows the system to handle more peak loads.
 - B. It lowers the cost of generation per unit for the same maximum demand.
 - C. It reduces the energy consumption during peak hours.
 - D. It indicates that a system is running at peak efficiency.

Question ID : 6306801029236
 Option 1 ID : 6306804039569
 Option 2 ID : 6306804039568
 Option 3 ID : 6306804039567
 Option 4 ID : 6306804039566
 Status : Answered
 Chosen Option : B

Q.23 The flag register of 8085 has ____ flags.

- Ans
- A. 4
 - B. 7
 - C. 6
 - D. 5

Question ID : 6306801015306
 Option 1 ID : 6306803984810
 Option 2 ID : 6306803984813
 Option 3 ID : 6306803984812
 Option 4 ID : 6306803984811
 Status : Answered
 Chosen Option : B

Q.24 Select the correct condition for an N-channel power MOSFET to be in the cut-off region.

Ans A. $V_{GS} > \text{threshold voltage}$

B. $V_{GS} = V_{DS} = \frac{V_{DD}}{2}$

C. $V_{GS} < \text{Threshold voltage}$

D. $V_{GS} = \text{Supply voltage } V_{DD}$

Question ID : 6306801005164
 Option 1 ID : 6306803944500
 Option 2 ID : 6306803944501
 Option 3 ID : 6306803944502
 Option 4 ID : 6306803944503
 Status : Answered
 Chosen Option : C

Q.25 What is the tensile strength range of wood?

Ans A. 700-1200 kg/cm²

B. 100-300 kg/cm²

C. 300-500 kg/cm²

D. 500-700 kg/cm²

Question ID : 6306801007220
 Option 1 ID : 6306803952603
 Option 2 ID : 6306803952600
 Option 3 ID : 6306803952601
 Option 4 ID : 6306803952602
 Status : Answered
 Chosen Option : C

Q.26 Under what circumstances are tenders typically invited?

Ans A. When the contract is exempt from standard procedures

B. Only when no other suppliers are available

C. When it is practicable and advantageous, particularly for contracts involving 'work' or 'repairs'

D. Only when a contract is worth more than a certain amount

Question ID : 6306801029437
 Option 1 ID : 6306804040380
 Option 2 ID : 6306804040379
 Option 3 ID : 6306804040378
 Option 4 ID : 6306804040377
 Status : Answered
 Chosen Option : C

Q.27 What does the term 'overhead charges' refer to in the context of estimating?

Ans A. The general administrative and operational expenses required to complete the project

B. The cost of materials used in the project

C. The profit margin of the contractor

D. The cost of subcontractors

Question ID : 6306801029424
 Option 1 ID : 6306804040324
 Option 2 ID : 6306804040322
 Option 3 ID : 6306804040323
 Option 4 ID : 6306804040325
 Status : Answered
 Chosen Option : A

Q.28 A high voltage winding of 3 ϕ transformer was initially designed in delta. When the design changed to star with parameters like power remain constant, which of the following statement is WRONG?

- Ans A. Winding conductor cross section increases
 B. Number of turns increases
 C. Winding insulation decreases
 D. Winding resistance increases

Question ID : 630680334676
Option 1 ID : 6306801301964
Option 2 ID : 6306801301962
Option 3 ID : 6306801301961
Option 4 ID : 6306801301963
Status : Answered
Chosen Option : A

Q.29 A 6 pole wave connected armature has 200 conductors and runs at 1000 RPM. The emf generated is 600 volts. Find the useful flux per pole.

- Ans A. 0.025 Wb
 B. 0.06 Wb
 C. 0.07 Wb
 D. 0.075 Wb

Question ID : 630680999467
Option 1 ID : 6306803921838
Option 2 ID : 6306803921839
Option 3 ID : 6306803921840
Option 4 ID : 6306803921841
Status : Answered
Chosen Option : B

Q.30 Which of the following combinations represents variable losses in the DC machines?

- Ans A. Mechanical loss and series field copper loss
 B. Armature copper loss and mechanical loss
 C. Series field copper loss and armature copper loss
 D. Shunt field loss and armature copper loss

Question ID : 630680999829
Option 1 ID : 6306803923460
Option 2 ID : 6306803923461
Option 3 ID : 6306803923463
Option 4 ID : 6306803923462
Status : Answered
Chosen Option : C

Q.31 एक विद्यार्थी अपने शिक्षक को दिखाने के लिए अपनी प्रेजेंटेशन की स्लाइड्स प्रिंट करना चाहता है। हालाँकि, विद्यार्थी के पास प्रत्येक पृष्ठ पर एक स्लाइड प्रिंट करने के लिए पर्याप्त कागज़ नहीं है। इसलिए वह प्रति पृष्ठ दो स्लाइड प्रिंट करने का निर्णय लेता है। प्रिंट डायलॉग बॉक्स में उसे कौन-सी कमांड का उपयोग करना चाहिए?

- Ans A. नोट्स पेज (Notes Page)
 B. स्लाइड्स (Slides)
 C. आउटलाइन व्यू (Outline View)
 D. हैंडआउट (Handouts)

Question ID : 630680787725
Option 1 ID : 6306803086704
Option 2 ID : 6306803086707
Option 3 ID : 6306803086706
Option 4 ID : 6306803086705
Status : Answered
Chosen Option : B

Q.32 Which of the following is NOT a condition for parallel operation of transformers?

- Ans A. Same KVA rating of both transformers
 B. Same phase sequence of both transformers
 C. Same polarity of both transformers
 D. Same percentage impedance of both transformers

Question ID : 630680380951
Option 1 ID : 6306801484791
Option 2 ID : 6306801484794
Option 3 ID : 6306801484793
Option 4 ID : 6306801484792
Status : Answered
Chosen Option : A

Q.33 Which of the following statements regarding the 'Draw Table' feature in MS Word 2019 is correct?

- Ans A. It can only be accessed through the Advanced Settings menu.
- B. It is not recommended for creating tables due to its limited functionality.
- C. It enables the creation of a table with only 5 rows and 5 columns.
- D. It provides a quick and flexible way to create tables with irregular shapes and sizes.

Question ID : 630680785793
 Option 1 ID : 6306803079264
 Option 2 ID : 6306803079265
 Option 3 ID : 6306803079262
 Option 4 ID : 6306803079263
 Status : Answered
 Chosen Option : D

Q.34 MOD 7 counter can count till max ____ states.

- Ans A. five
- B. eight
- C. six
- D. seven

Question ID : 6306801015237
 Option 1 ID : 6306803984529
 Option 2 ID : 6306803984526
 Option 3 ID : 6306803984528
 Option 4 ID : 6306803984527
 Status : Answered
 Chosen Option : D

Q.35 The voltage drop due to armature resistance in an alternator can be minimised by _____.

- Ans A. decreasing the armature resistance
- B. reducing excitation voltage
- C. increasing the armature resistance
- D. increasing excitation voltage

Question ID : 630680638984
 Option 1 ID : 6306802501740
 Option 2 ID : 6306802501742
 Option 3 ID : 6306802501741
 Option 4 ID : 6306802501743
 Status : Answered
 Chosen Option : A

Q.36 A pure capacitor of reactance $5\ \Omega$ is connected across an AC source of $v(t) = 10\sin(50t - 10^\circ)$ V. The current through the circuit is _____.

- Ans A. $2\sin(50 + 80^\circ)$ A
- B. $2500\sin(50 + 100^\circ)$ A
- C. $2\sin(50 - 100^\circ)$ A
- D. $2500\sin(50 + 80^\circ)$ A

Question ID : 630680328977
 Option 1 ID : 6306801279861
 Option 2 ID : 6306801279862
 Option 3 ID : 6306801279864
 Option 4 ID : 6306801279863
 Status : Answered
 Chosen Option : A

Q.37 Who is known as the 'father of computers' for his conceptual design of the Analytical Engine?

- Ans A. Alan Turing
- B. John Von Neumann
- C. Charles Babbage
- D. Konrad Zuse

Question ID : 630680817220
 Option 1 ID : 6306803200966
 Option 2 ID : 6306803200967
 Option 3 ID : 6306803200968
 Option 4 ID : 6306803200969
 Status : Answered
 Chosen Option : C

Q.38 A 100 kVA transformer used for lighting has an iron loss of 4 kW and full load copper loss of 2 kW per hour. The transformer is connected with half the load for 8 hours during the day. Calculate the all day efficiency of the transformer.

- Ans A. 0.8
 B. 0.85
 C. 0.9
 D. 0.875

Question ID : 6306801000200
Option 1 ID : 6306803924931
Option 2 ID : 6306803924932
Option 3 ID : 6306803924934
Option 4 ID : 6306803924933
Status : Answered
Chosen Option : C

Q.39 The equivalent circuit of a transformer represents the:

- Ans A. physical arrangement of the windings
 B. magnetic flux distribution within the core
 C. electrical behaviour of the transformer under load
 D. mechanical components of the transformer

Question ID : 630680380922
Option 1 ID : 6306801484675
Option 2 ID : 6306801484676
Option 3 ID : 6306801484677
Option 4 ID : 6306801484678
Status : Answered
Chosen Option : C

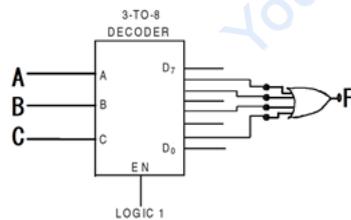
Q.40 Which of the following statements are correct about damper winding in a synchronous motor?

- I. Damper windings are used to provide excitation to field winding.
II. Damper windings are typically connected to the stator of the synchronous motor.
III. Damper windings help to minimise hunting and improving stability.
IV. When the motor runs at synchronous speed, the damper winding does not carry any current.

- Ans A. Only Statements I and II
 B. Only Statements III and IV
 C. Only Statements II and III
 D. Only Statements I and III

Question ID : 630680629374
Option 1 ID : 6306802499942
Option 2 ID : 6306802499943
Option 3 ID : 6306802499945
Option 4 ID : 6306802499944
Status : Answered
Chosen Option : B

Q.41 The output of the following decoder circuit _____.



- Ans A. is $F(A,B,C) = \sum (1,2,3,5,7)$
 B. is $F(A,B,C) = \sum (0,2,4,6)$
 C. cannot be determined because of inadequate data
 D. is $F(A,B,C) = \sum (1,3,5,6)$

Question ID : 630680388656
Option 1 ID : 6306801515089
Option 2 ID : 6306801515088
Option 3 ID : 6306801515086
Option 4 ID : 6306801515087
Status : Answered
Chosen Option : D

Q.42 A T flip flop can be realised by using a JK flip flop by _____.

- Ans A. connecting both the input terminals to the same input
 B. connecting both the input terminals to Ground
 C. connecting both the input terminals to Vcc
 D. connecting terminal J to the output and terminal K to the ground

Question ID : 6306801015257
Option 1 ID : 6306803984616
Option 2 ID : 6306803984615
Option 3 ID : 6306803984614
Option 4 ID : 6306803984617
Status : Answered
Chosen Option : D

Q.43 Read the given statements carefully and select the most appropriate option regarding the impact of negative feedback on output impedance in feedback amplifier circuits.

Statement I: Due to voltage series feedback, the output impedance is decreased.
Statement II: Due to voltage shunt feedback, the output impedance is decreased.

- Ans A. Both statements I and II are wrong.
 B. Only statement II is correct.
 C. Both statements I and II are correct.
 D. Only statement I is correct.

Question ID : 6306801004688
Option 1 ID : 6306803942628
Option 2 ID : 6306803942626
Option 3 ID : 6306803942627
Option 4 ID : 6306803942625
Status : Answered
Chosen Option : B

Q.44 The dial switch in a Crompton potentiometer is divided into _____ steps of _____ each such that total resistance of the dial switch is 150 Ω .

- Ans A. 10 Ω ; 15
 B. 10 Ω ; 10
 C. 15 Ω ; 10
 D. 10 Ω ; 20

Question ID : 630680205131
Option 1 ID : 630680795388
Option 2 ID : 630680795387
Option 3 ID : 630680795389
Option 4 ID : 630680795390
Status : Answered
Chosen Option : A

Q.45 Read the given statements carefully and select the most appropriate option regarding the BJT common base amplifier circuit.

Statement I: The current gain is much greater than one.
Statement II: The common base amplifier is an inverting amplifier.

- Ans A. Both statements I and II are wrong.
 B. Only statement II is correct.
 C. Both statements I and II are correct.
 D. Only statement I is correct.

Question ID : 6306801004728
Option 1 ID : 6306803942784
Option 2 ID : 6306803942782
Option 3 ID : 6306803942783
Option 4 ID : 6306803942781
Status : Answered
Chosen Option : A

Q.46 Which of the following statements regarding encoders is/are true?
 Statement (1): An encoder converts an active input signal into a coded output signal.
 Statement (2): Encoders can be used to convert decimal number to binary coded decimal.
 Statement (3): An encoder cannot be used for converting octal number to binary number.

- Ans A. Only statements (2) and (3) are true.
 B. Only statements (1) and (2) are true.
 C. All statements (1), (2) and (3) are true.
 D. Only statements (1) and (3) are true.

Question ID : 630680405305
 Option 1 ID : 6306801580479
 Option 2 ID : 6306801580478
 Option 3 ID : 6306801580481
 Option 4 ID : 6306801580480
 Status : Answered
 Chosen Option : B

Q.47 A polarity test can be performed using ____ measurements with the transformer on ____.

- Ans A. current; load
 B. voltage; load
 C. voltage; no load
 D. current; no load

Question ID : 6306801003797
 Option 1 ID : 6306803939384
 Option 2 ID : 6306803939382
 Option 3 ID : 6306803939381
 Option 4 ID : 6306803939383
 Status : Answered
 Chosen Option : C

Q.48 _____ is a combination of a strain gauge with an elastic member used for the measurement of load or weight.

- Ans A. Load cell
 B. Microphone
 C. Piezoelectric transducer
 D. Bourdon tube

Question ID : 630680205132
 Option 1 ID : 630680795392
 Option 2 ID : 630680795394
 Option 3 ID : 630680795391
 Option 4 ID : 630680795393
 Status : Answered
 Chosen Option : D

Q.49 A memory has capacity in nibbles and bytes. The nibble and byte, respectively, have:

- Ans A. 2 bits and 8 bits
 B. 8 bits and 2 bits
 C. 4 bits and 8 bits
 D. 4 bits and 2 bits

Question ID : 630680388671
 Option 1 ID : 6306801515147
 Option 2 ID : 6306801515146
 Option 3 ID : 6306801515149
 Option 4 ID : 6306801515148
 Status : Answered
 Chosen Option : C

Q.50 _____ is the fastest available memory.

- Ans A. SRAM
 B. DRAM
 C. ROM
 D. PROM

Question ID : 6306801014833
 Option 1 ID : 6306803982919
 Option 2 ID : 6306803982920
 Option 3 ID : 6306803982921
 Option 4 ID : 6306803982918
 Status : Answered
 Chosen Option : A

Q.51 Convert (121.40) decimal into the octal number system.

- Ans A. (131.71)₈
 B. (171.31)₈
 C. (131.17)₈
 D. (171.13)₈

Question ID : 6306801015222
 Option 1 ID : 6306803984468
 Option 2 ID : 6306803984466
 Option 3 ID : 6306803984469
 Option 4 ID : 6306803984467
 Status : Answered
 Chosen Option : B

Q.52 The _____ connection method is used for connecting high impedance components like high value resistors, large coils and small capacitors to the terminals of Q-meter.

- Ans A. direct
 B. series
 C. parallel
 D. partial

Question ID : 630680195056
 Option 1 ID : 630680756714
 Option 2 ID : 630680756713
 Option 3 ID : 630680756715
 Option 4 ID : 630680756716
 Status : Answered
 Chosen Option : B

Q.53 What is the use of HOLD and HLDA pin in 8085 microprocessor?

- Ans A. DMA operation
 B. Serial communication
 C. Power saving
 D. Interrupt handling

Question ID : 6306801015333
 Option 1 ID : 6306803984920
 Option 2 ID : 6306803984919
 Option 3 ID : 6306803984921
 Option 4 ID : 6306803984918
 Status : Answered
 Chosen Option : A

Q.54 Which of the following reasons does NOT cause any change in terminal voltage of an alternator with change in load?

- Ans A. Voltage drop on account of armature reaction
 B. Voltage drop on account of armature flux
 C. Voltage drop on account of armature leakage reactance
 D. Voltage drop on account of armature effective resistance

Question ID : 6306801005851
 Option 1 ID : 6306803947238
 Option 2 ID : 6306803947239
 Option 3 ID : 6306803947237
 Option 4 ID : 6306803947236
 Status : Answered
 Chosen Option : C

Q.55 In a grid, 'Under frequency' condition occurs when:

- Ans A. the total MW generated is more than the total load
 B. the total MW generated is less than the total load
 C. the total MW generated is equal to the total load
 D. the total MW generated is zero

Question ID : 6306801016552
 Option 1 ID : 6306803989752
 Option 2 ID : 6306803989753
 Option 3 ID : 6306803989754
 Option 4 ID : 6306803989755
 Status : Answered
 Chosen Option : B

Q.56 What is the impact of room size and wall colour on the Coefficient of Utilisation?

- Ans A. Higher for large rooms with light-coloured walls
 B. Lower for large rooms with light-coloured walls
 C. Lower for large rooms with dark-coloured walls
 D. Higher for small rooms with dark colours

Question ID : 630680102999
Option 1 ID : 6306804042692
Option 2 ID : 6306804042693
Option 3 ID : 6306804042694
Option 4 ID : 6306804042691
Status : Answered
Chosen Option : B

Q.57 Select the correct power amplifier circuit to eliminate cross over distortion.

- Ans A. Class B power amplifier
 B. Transformer coupled Class A power amplifier
 C. Class AB power amplifier
 D. Series fed Class A power amplifier

Question ID : 6306801005188
Option 1 ID : 6306803944597
Option 2 ID : 6306803944599
Option 3 ID : 6306803944598
Option 4 ID : 6306803944596
Status : Answered
Chosen Option : C

Q.58 The flux emitted by a lamp in all directions is 2000 lumens. Calculate its MSCP.

- Ans A. $\frac{2000}{2\pi}$
 B. $\frac{250}{\pi}$
 C. $\frac{2000}{\pi}$
 D. $\frac{500}{\pi}$

Question ID : 630680389666
Option 1 ID : 6306801519122
Option 2 ID : 6306801519125
Option 3 ID : 6306801519123
Option 4 ID : 6306801519124
Status : Answered
Chosen Option : D

Q.59 What is one of the primary advantages of interconnecting two or more generating stations?

- Ans A. Mutual transfer of energy from surplus to deficit zones
 B. More frequent power interruptions
 C. Higher installed capacity requirement
 D. Increased capital cost

Question ID : 6306801029251
Option 1 ID : 6306804039628
Option 2 ID : 6306804039629
Option 3 ID : 6306804039627
Option 4 ID : 6306804039626
Status : Answered
Chosen Option : A

Q.60 Pull out torque refers to the ability of motor:

- Ans A. to accelerate the load
- B. to remain in synchronism under rated load conditions
- C. to pull into synchronism when changing from induction to synchronous motor operation
- D. to remain in synchronism under no load conditions

Question ID : 6306801006529
 Option 1 ID : 6306803949866
 Option 2 ID : 6306803949868
 Option 3 ID : 6306803949867
 Option 4 ID : 6306803949869
 Status : Answered
 Chosen Option : C

Q.61 Which of the following methods is NOT used in solving A-C parallel circuits?

- Ans A. Admittance method
- B. Impedance method
- C. Phasor method
- D. j-operator method

Question ID : 630680334700
 Option 1 ID : 6306801302059
 Option 2 ID : 6306801302060
 Option 3 ID : 6306801302057
 Option 4 ID : 6306801302058
 Status : Answered
 Chosen Option : D

Q.62 8085 microprocessor is a ____ bit microprocessor.

- Ans A. 32
- B. 4
- C. 8
- D. 16

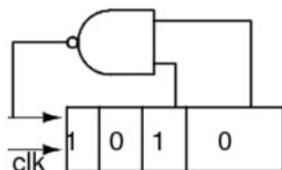
Question ID : 6306801015297
 Option 1 ID : 6306803984777
 Option 2 ID : 6306803984774
 Option 3 ID : 6306803984775
 Option 4 ID : 6306803984776
 Status : Answered
 Chosen Option : A

Q.63 Which of the following type of connections is most economical for small and high voltage transformers, if the load is balanced?

- Ans A. $\frac{\text{Star}}{\text{Delta}}$ connection
- B. $\frac{\text{Delta}}{\text{Star}}$ connection
- C. $\frac{\text{Delta}}{\text{Delta}}$ connection
- D. $\frac{\text{Star}}{\text{Star}}$ connection

Question ID : 630680227827
 Option 1 ID : 630680883985
 Option 2 ID : 630680883986
 Option 3 ID : 630680883983
 Option 4 ID : 630680883984
 Status : Answered
 Chosen Option : B

Q.64 In the circuit shown below, a SIPO register is loaded with 1010. After 3 clock pulses, the data present will be _____.



- Ans A. 1111
 B. 0101
 C. 1010
 D. 0000

Question ID : 630680176955
Option 1 ID : 630680686024
Option 2 ID : 630680686026
Option 3 ID : 630680686025
Option 4 ID : 630680686027
Status : Answered
Chosen Option : A

Q.65 What is the primary purpose of preparing a supplementary estimate during a project's execution?

- Ans A. To allocate tasks among team members
 B. To address changes or additions to the original scope of work
 C. To develop a final project report
 D. To evaluate the project's progress

Question ID : 6306801007467
Option 1 ID : 6306803953562
Option 2 ID : 6306803953560
Option 3 ID : 6306803953561
Option 4 ID : 6306803953559
Status : Answered
Chosen Option : B

Q.66 Excitation to a self excited DC generator is provided by _____ current.

- Ans A. field
 B. armature
 C. load
 D. eddy

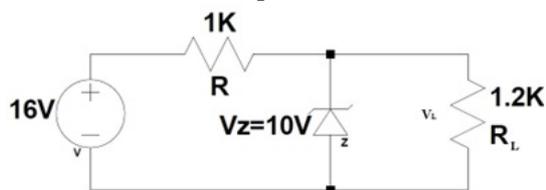
Question ID : 630680999264
Option 1 ID : 6306803920968
Option 2 ID : 6306803920966
Option 3 ID : 6306803920969
Option 4 ID : 6306803920967
Status : Answered
Chosen Option : A

Q.67 For determination of relative polarity of two windings of a transformer, the two windings are connected _____.

- Ans A. across ammeter
 B. in parallel across a voltmeter
 C. in series with ammeter
 D. in series across a voltmeter

Question ID : 6306801003854
Option 1 ID : 6306803939628
Option 2 ID : 6306803939626
Option 3 ID : 6306803939627
Option 4 ID : 6306803939625
Status : Answered
Chosen Option : C

Q.68 For the network shown below, determine the current through the Zener diode and voltage across load resistance R_L .



- Ans
- A. Zener current is 0 amp and load resistance voltage is 8.73 volts.
 - B. Zener current is 8.73 amp and load resistance voltage is 0 volts
 - C. Zener current is 0 amp and load resistance voltage is 0 volts
 - D. Zener current is 0.5 amp and load resistance voltage is 10 volts

Question ID : 630680195583
 Option 1 ID : 630680758803
 Option 2 ID : 630680758804
 Option 3 ID : 630680758802
 Option 4 ID : 630680758801
 Status : Answered
 Chosen Option : A

Q.69 What does the Absorption Factor represent?

- Ans
- A. The difference between the total lumens emitted by the source of light and the net lumens available after absorption
 - B. The product of total lumens emitted by the source of light and the net lumens available after absorption
 - C. The ratio of total lumens emitted by the source of light to the net lumens available after absorption
 - D. The ratio of net lumens available after absorption to the total lumens emitted by the source of light

Question ID : 6306801029988
 Option 1 ID : 6306804042648
 Option 2 ID : 6306804042650
 Option 3 ID : 6306804042647
 Option 4 ID : 6306804042649
 Status : Answered
 Chosen Option : C

Q.70 What is the octal equivalent of the binary number (110100101.11101)?

- Ans
- A. $(322.75)_8$
 - B. $(275.46)_8$
 - C. $(645.72)_8$
 - D. $(546.71)_8$

Question ID : 6306801014864
 Option 1 ID : 6306803983044
 Option 2 ID : 6306803983045
 Option 3 ID : 6306803983042
 Option 4 ID : 6306803983043
 Status : Answered
 Chosen Option : C

Q.71 The speed control of a DC shunt motor by armature voltage control is a:

- Ans
- A. constant power system
 - B. variable torque system
 - C. constant torque system
 - D. variable power system

Question ID : 630680999652
 Option 1 ID : 6306803922711
 Option 2 ID : 6306803922712
 Option 3 ID : 6306803922710
 Option 4 ID : 6306803922713
 Status : Answered
 Chosen Option : C

Q.72 What is the use of stack pointer in 8085 microprocessors?

- Ans A. To transfer the data
 B. To perform logical operations
 C. To store temporary data
 D. To manage stack memory

Question ID : 6306801015311
 Option 1 ID : 6306803984832
 Option 2 ID : 6306803984833
 Option 3 ID : 6306803984830
 Option 4 ID : 6306803984831
 Status : Answered
 Chosen Option : B

Q.73 The armature core of a DC generator is made up of:

- Ans A. low permeability silicon steel stampings
 B. copper stampings
 C. high permeability silicon steel stampings
 D. aluminium stampings

Question ID : 630680999369
 Option 1 ID : 6306803921406
 Option 2 ID : 6306803921408
 Option 3 ID : 6306803921407
 Option 4 ID : 6306803921409
 Status : Answered
 Chosen Option : C

Q.74 Which biomass type is used in the form of pellets to release stored energy?

- Ans A. Bagasse plant waste
 B. Animal waste
 C. Wood and its residues
 D. Municipal solid waste

Question ID : 6306801029343
 Option 1 ID : 6306804039990
 Option 2 ID : 6306804039992
 Option 3 ID : 6306804039991
 Option 4 ID : 6306804039993
 Status : Answered
 Chosen Option : A

Q.75 The total magnitude of the current (in ampere) entering a junction 'A' is given by $(4 - x)$ and that of the current leaving the same junction is given by $(2 + x)$. What is the total value of the current entering the junction?

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

Question ID : 630680383087
 Option 1 ID : 6306801493258
 Option 2 ID : 6306801493256
 Option 3 ID : 6306801493255
 Option 4 ID : 6306801493257
 Status : Answered
 Chosen Option : D

Section : Numerical Ability

Q.76 The speed of a truck is 9 metres/second. The distance (in kilometres) travelled by the truck in 7 hours and 30 minutes is:

- Ans A. 247
 B. 241
 C. 243
 D. 248

Question ID : 6306801063184
 Option 1 ID : 6306804175096
 Option 2 ID : 6306804175097
 Option 3 ID : 6306804175095
 Option 4 ID : 6306804175098
 Status : Answered
 Chosen Option : C

Q.77 A trader offers a discount of 6% on an article if a customer makes the payment in cash. How much percentage above the cost price should he mark the article to make a profit of 6%? [Give your answer rounded off to 2 decimal places.]

- Ans
- A. 12.86%
 - B. 16.37%
 - C. 12.77%
 - D. 18.87%

Question ID : 630680862766
 Option 1 ID : 6306803378952
 Option 2 ID : 6306803378953
 Option 3 ID : 6306803378951
 Option 4 ID : 6306803378954
 Status : Answered
 Chosen Option : C

Q.78 दो मित्रों, निर्मल और राकेश, की मासिक आय क्रमशः 5:7 के अनुपात में है और इनमें से प्रत्येक ₹99000 प्रति माह बचाता है। यदि इनके मासिक व्यय का अनुपात 2:4 है, तो निर्मल की मासिक आय (₹ में) ज्ञात करें।

- Ans
- A. 166000
 - B. 165000
 - C. 231000
 - D. 164000

Question ID : 630680591847
 Option 1 ID : 6306802315856
 Option 2 ID : 6306802315855
 Option 3 ID : 6306802315858
 Option 4 ID : 6306802315857
 Status : Answered
 Chosen Option : B

Q.79 धारा की दिशा में धारा की चाल 48 km/h है और धारा की चाल 12 km/h है। धारा की विपरीत दिशा में 60 km और धारा की दिशा में 60 km की दूरी तय करने में धारा द्वारा लिया गया कुल समय ज्ञात कीजिए।

- Ans
- A. 2 घंटे 36 मिनट
 - B. 4 घंटे 15 मिनट
 - C. 3 घंटे 52 मिनट
 - D. 3 घंटे 45 मिनट

Question ID : 630680572074
 Option 1 ID : 6306802237156
 Option 2 ID : 6306802237159
 Option 3 ID : 6306802237158
 Option 4 ID : 6306802237157
 Status : Answered
 Chosen Option : B

Q.80 The HCF of two numbers is 74 and their LCM is 12210. If one of the numbers is 1110, what is the sum of the two numbers?

- Ans
- A. 1924
 - B. 1244
 - C. 1429
 - D. 1568

Question ID : 630680594830
 Option 1 ID : 6306802327408
 Option 2 ID : 6306802327406
 Option 3 ID : 6306802327405
 Option 4 ID : 6306802327407
 Status : Answered
 Chosen Option : A

Q.81 On selling an iron for ₹1,260, Arman loses 16%. At what price should he sell it to get an 18% profit?

- Ans
- A. ₹1,340
 - B. ₹1,770
 - C. ₹1,480
 - D. ₹1,590

Question ID : 630680615257
 Option 1 ID : 6306802407702
 Option 2 ID : 6306802407705
 Option 3 ID : 6306802407703
 Option 4 ID : 6306802407704
 Status : Answered
 Chosen Option : B

Q.82 The average of first 103 odd natural numbers, is:

- Ans A. 103
 B. 51.5
 C. 104
 D. 102

Question ID : 630680551970
 Option 1 ID : 6306802158105
 Option 2 ID : 6306802158108
 Option 3 ID : 6306802158106
 Option 4 ID : 6306802158107
 Status : Answered
 Chosen Option : B

Q.83 ₹1171 is divided among Rekha, Sanjay, and Poonam in such a way that if ₹20, ₹17, and ₹14 be deducted from their respective shares, they have money in the ratio 3:15:10. Find Sanjay's share.

- Ans A. ₹700
 B. ₹500
 C. ₹600
 D. ₹750

Question ID : 6306801063178
 Option 1 ID : 6306804175073
 Option 2 ID : 6306804175074
 Option 3 ID : 6306804175071
 Option 4 ID : 6306804175072
 Status : Answered
 Chosen Option : C

Q.84 The distance (rounded off to one decimal place) between two points on a map is 3 cm. The scale of the map is 1 : 610119. The actual distance (rounded off to two decimal place) between the two points (in km) is:

- Ans A. 22.4
 B. 22.1
 C. 18.3
 D. 20.4

Question ID : 630680789699
 Option 1 ID : 6306803094578
 Option 2 ID : 6306803094579
 Option 3 ID : 6306803094576
 Option 4 ID : 6306803094577
 Status : Answered
 Chosen Option : C

Q.85 In a workshop, the number of participants in English, Sanskrit and Science are 144, 192 and 288, respectively. Find the minimum number of rooms required, if in each room, the same number of participants are to be seated and all of them being in the same subject.

- Ans A. 13
 B. 15
 C. 9
 D. 12

Question ID : 630680467079
 Option 1 ID : 6306801824271
 Option 2 ID : 6306801824272
 Option 3 ID : 6306801824269
 Option 4 ID : 6306801824270
 Status : Answered
 Chosen Option : D

Q.86 A man receives ₹6400 per month as salary. He saves 44% of his salary every month. His expenditure (in ₹) per month is:

- Ans A. 3584
 B. 3523
 C. 3612
 D. 3631

Question ID : 630680789130
 Option 1 ID : 6306803092300
 Option 2 ID : 6306803092303
 Option 3 ID : 6306803092302
 Option 4 ID : 6306803092301
 Status : Answered
 Chosen Option : A

Q.87 Gopal can do a piece of work in 12 hours. Akshay can do it in 28 hours. With the assistance of Atul, they completed the work in 7 hours. In how many hours can Atul alone do twice the same work?

- Ans A. 84
 B. 86
 C. 83
 D. 85

Question ID : 6306801063172
Option 1 ID : 6306804175047
Option 2 ID : 6306804175050
Option 3 ID : 6306804175048
Option 4 ID : 6306804175049
Status : Answered
Chosen Option : A

Q.88 Mohan invests a sum of ₹5400 and Varun invests a sum of ₹10200 at the same rate of simple interest per annum. If, at the end of 5 years, Varun gets ₹600 more interest than Mohan, then find the rate of interest per annum (in percentage).

- Ans A. 3.5
 B. 4.5
 C. 1.5
 D. 2.5

Question ID : 630680613593
Option 1 ID : 6306802401105
Option 2 ID : 6306802401106
Option 3 ID : 6306802401107
Option 4 ID : 6306802401104
Status : Answered
Chosen Option : D

Q.89 The difference between the compound interest (when interest is compounded annually) and the simple interest if ₹91200 is deposited at 10% rate of interest per annum for 2 years is:

- Ans A. ₹917.2
 B. ₹916.2
 C. ₹912
 D. ₹914.6

Question ID : 630680809147
Option 1 ID : 6306803170170
Option 2 ID : 6306803170168
Option 3 ID : 6306803170167
Option 4 ID : 6306803170169
Status : Answered
Chosen Option : C

Q.90 A cylindrical rod has an outer curved surface area of 5400 cm^2 . If the length of the rod is 20 cm, then the outer radius (in cm) of the rod, correct to two places of decimal, is: Take $\pi = \frac{22}{7}$

- Ans A. 41.13
 B. 44.69
 C. 42.95
 D. 45.07

Question ID : 630680855860
Option 1 ID : 6306803352143
Option 2 ID : 6306803352145
Option 3 ID : 6306803352142
Option 4 ID : 6306803352144
Status : Answered
Chosen Option : C

Section : General Awareness

Q.91 भारतीय संविधान किस अनुच्छेद के अंतर्गत किसी राज्य में राष्ट्रपति शासन लगाने की अनुमति देता है?

- Ans
- A. अनुच्छेद 368
 - B. अनुच्छेद 356
 - C. अनुच्छेद 352
 - D. अनुच्छेद 256

Question ID : 630680942589
 Option 1 ID : 6306803694797
 Option 2 ID : 6306803694796
 Option 3 ID : 6306803694795
 Option 4 ID : 6306803694794
 Status : Answered
 Chosen Option : B

Q.92 'बाउंड्री लैब: इनसाइड द ग्लोबल एक्सपेरिमेंट कॉल्ड स्पॉट' पुस्तक किसके द्वारा लिखी गई है?

- Ans
- A. मुकुल रोहतगी (Mukul Rohatgi)
 - B. गोपाल सुब्रमण्यम (Gopal Subramaniam)
 - C. हरीश साल्वे (Harish Salve)
 - D. नंदन कामत (Nandan Kamath)

Question ID : 630680967886
 Option 1 ID : 6306803796065
 Option 2 ID : 6306803796066
 Option 3 ID : 6306803796064
 Option 4 ID : 6306803796063
 Status : Answered
 Chosen Option : B

Q.93 भारत 2011 की जनगणना के अनुसार, निम्नलिखित में से किस संघीय राज्यक्षेत्र की जनसंख्या वृद्धि दर सबसे कम है?

- Ans
- A. पुदुचेरी
 - B. चंडीगढ़
 - C. लक्षद्वीप
 - D. अण्डमान और निकोबार द्वीपसमूह

Question ID : 630680929733
 Option 1 ID : 6306803643749
 Option 2 ID : 6306803643748
 Option 3 ID : 6306803643750
 Option 4 ID : 6306803643747
 Status : Answered
 Chosen Option : C

Q.94 Which of the following kitchen ingredients is NOT acidic in nature?

- Ans
- A. Baking soda
 - B. Vinegar
 - C. Lemon juice
 - D. Tamarind

Question ID : 630680942467
 Option 1 ID : 6306803694317
 Option 2 ID : 6306803694316
 Option 3 ID : 6306803694315
 Option 4 ID : 6306803694318
 Status : Answered
 Chosen Option : A

Q.95 बुदाती भाषा भारत के निम्नलिखित में से किस राज्य के पश्चिमी क्षेत्र में बोली जाती है?

- Ans
- A. महाराष्ट्र
 - B. छत्तीसगढ़
 - C. त्रिपुरा
 - D. हिमाचल प्रदेश

Question ID : 630680990567
 Option 1 ID : 6306803886604
 Option 2 ID : 6306803886606
 Option 3 ID : 6306803886605
 Option 4 ID : 6306803886607
 Status : Answered
 Chosen Option : A

Q.96 1883 में कौन-सा विधेयक, भारतीय न्यायाधीशों और मजिस्ट्रेटों को भारत में ब्रिटिश विषयों से संबंधित मामलों की सुनवाई या अध्यक्षता करने की शक्ति प्रदान करने के लिए प्रस्तावित किया गया था?

- Ans A. इल्बर्ट विधेयक (Ilbert Bill)
 B. किराएदारी विधेयक (Tenancy bill)
 C. शस्त्र विधेयक (Arms bill)
 D. न्यायपालिका विधेयक (Judiciary bill)

Question ID : 630680990532
Option 1 ID : 6306803886483
Option 2 ID : 6306803886482
Option 3 ID : 6306803886481
Option 4 ID : 6306803886480
Status : Answered
Chosen Option : A

Q.97 नंदा देवी शिखर भारत की किस पर्वत श्रृंखला में स्थित है?

- Ans A. पश्चिमी घाट
 B. अरावली
 C. हिमालय
 D. पूर्वी घाट

Question ID : 630680929700
Option 1 ID : 6306803643609
Option 2 ID : 6306803643608
Option 3 ID : 6306803643607
Option 4 ID : 6306803643610
Status : Answered
Chosen Option : A

Q.98 जून 2024 में, चीफ ऑफ आर्मी स्टाफ के रूप में निम्नलिखित में से किसकी नियुक्ति की गई?

- Ans A. विजय कुमार सिंह
 B. मनोज पांडे
 C. दलबीर सिंह सुहाग
 D. उपेंद्र द्विवेदी

Question ID : 630680943276
Option 1 ID : 6306803697500
Option 2 ID : 6306803697498
Option 3 ID : 6306803697499
Option 4 ID : 6306803697497
Status : Answered
Chosen Option : C

Q.99 Which Fundamental Right is protected under Article 21 of the Indian Constitution?

- Ans A. Right to Constitutional Remedies
 B. Right to Protection of Life and Personal Liberty
 C. Right to Freedom of Speech and Expression
 D. Right to Education

Question ID : 630680942538
Option 1 ID : 6306803694596
Option 2 ID : 6306803694595
Option 3 ID : 6306803694594
Option 4 ID : 6306803694597
Status : Answered
Chosen Option : C

Q.100 2024 में, निम्नलिखित में से किस राज्य सरकार के द्वारा, राजीव आरोग्यश्री कार्यक्रम के अंतर्गत ₹10 लाख तक की मुफ्त चिकित्सा और स्वास्थ्य सेवा प्रदान करने के लिए चेयुथा स्कीम शुरू की गई?

- Ans A. तमिलनाडु
 B. तेलंगाना
 C. गुजरात
 D. आंध्र प्रदेश

Question ID : 630680946398
Option 1 ID : 6306803710315
Option 2 ID : 6306803710314
Option 3 ID : 6306803710316
Option 4 ID : 6306803710313
Status : Answered
Chosen Option : B