Subject Code : 102 V

| Subject Code | Exam Date | $\begin{aligned} & \mathbf{Q} \\ & \text { Id } \end{aligned}$ | Questions | Answer Key |
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| 102 | 21-01-2021 | 81 | World consumer rights day is on <br> (A) March 10 <br> (B) March 15 <br> (C) May 10 <br> (D) May 15 | (B) |
| 102 | 21-01-2021 | 82 | Who among the following is NOT a recepient of Mother Teresa Memorial Awards for Social Justice 2020 (by Harmony Foundation, an international NGO) with the theme for the year being "Celebrating Compassion in times of Covid"? <br> (A) Father Fabio Stevenazzi, Milan, Italy <br> (B) Shri Sanjay Pandey IPS, DG Home Guards, Maharashtra <br> (C) Smt KK Shailaja, Minister of Health, Kerala <br> (D) Shri Vinod Kumar Yadav, Chairman \& CEO of Railway Board | (D) |
| 102 | 21-01-2021 | 83 | India's first indigenous 9 mm Machine Pistol named "Asmi" has been jointly developed by $\ldots \ldots \ldots .$. and Indian Army, recently, in a record time of four months. <br> (A) DRDO <br> (B) SAIL <br> (C) HAL <br> (D) NTPC | (A) |
| 102 | 21-01-2021 | 84 | Which country has recently launched Toycathon2021 and the Toycathon Portal, the project is being organized to develop the country as the global Toy manufacturing hub? | (C) |

(A) China
(B) USA
(C) India
(D) Japan

COVAXIN, India's indigenous COVID-19 vaccine is developed by in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV).
(A) CanSino Biologics
(B) Bharat Biotech
(C) Pfizer
(D) Zydus Cadila

Look carefully for the pattern, and then choose which pair of numbers comes next.

2444416388
(A) 1012
(B) 3532
(C) 349
(D) 3510

87 Five friends A, B , C, D and E travelled from
(D)

Tamil Nadu to five different states Uttar Pradesh, Maharashtra, Rajasthan, Karnataka and Punjab by 5 different modes of transport: Cycle, Bus, Train, Truck, and Bike. The one who travelled to Rajasthan did not travel by Bike. C went to Karnataka by Truck and B went to Maharashtra by Train. D travelled by Bike and E travelled by Bus. Tamil Nadu is not connected by Cycle to Uttar Pradesh and Rajasthan. Which state did E travel to?
(A) Punjab
(B) Uttar Pradesh
(C) Rajasthan
(D) None of the options

| 102 | 21-01-2021 | 88 | Grain : Stock : : Stick : ? <br> (A) Bundle <br> (B) String <br> (C) Collection <br> (D) Heap | (A) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 89 | Read the following instructions: <br> P \$ Q means P is the brother of Q ; $\mathrm{P} \# \mathrm{Q}$ means P is the mother of Q ; $\mathrm{P} * \mathrm{Q}$ means P is the daughter of Q <br> If the code of family is A \# B \$ C * D, who is the father among them? <br> (A) D <br> (B) B <br> (C) C <br> (D) A | (A) |


| 102 | 21-01-2021 | 90 | In a row of persons, the position of Sakshi from the left side of the row is 26th and position of Sakshi from the right side of the row is 35 th. Find the total number of students in the row? <br> (A) 67 <br> (B) 32 <br> (C) 46 <br> (D) 60 | (D) |
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| 102 | 21-01-2021 | 91 | Arrange in proper sequence to form a meaningful sentence: <br> Since the advent of smartphones <br> A. they are only licensed to use it <br> B. to accept that they do not control | (C) |

C. the software in their devices;
D. consumers have been forced
(A) ABCD
(B) DABC
(C) DBCA
(D) CBAD

Choose the synonym of the word "Incur"
(A) Misunderstand
(B) Push
(C)
(C) Gain
(D) Discourage

Find out whether there is any Grammatical error in the underlined part of the below sentence. If yes, indicate the correct answer among the given options, else indicate "No correction":

## They were all shocked at his failure in the competition.

(A) were shocked at all
(B) had all shocked
(C) had been all shocked on
(D) No correction

Fill up with the correct preposition:
When we get ready for dinner, I have to take my books the table.
(A) Off
(B) From
(C) Out
(D) Of

| 102 | 21-01-2021 | 95 | Complete the following sentence meaningfully: <br> "The employer appeared to be in such an affable mood that Rohit ...... <br> (A) decided to ask for a raise in his salary <br> (B) was scared to talk to him about his leave <br> (C) felt very guilty for his inadvertent slip <br> (D) promised him that he would not commit mistake again | (A) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 96 | What is the correct meaning of the underlined phrase in the following sentence: <br> I met him for help, but he sent me away to a place that provides refuge. <br> (A) Sanatorium <br> (B) Shelter <br> (C) Orphanage <br> (D) Asylum | (D) |
| 102 | 21-01-2021 | 97 | Antonym of crestfallen <br> (A) cheerful <br> (B) disturbed <br> (C) indignant <br> (D) dismayed | (A) |
| 102 | 21-01-2021 | 98 | Select the correct sentence. <br> (A) I have got my M.Sc. degree in 1988. <br> (B) I got my M.Sc. degree in 1988. <br> (C) I have my M.Sc. degree in 1988. <br> (D) I get my M.Sc. degree in 1988. | (B) |
| 102 | 21-01-2021 | 99 | Choose the option that completes the sentence most meaningfully and appropriately: | (B) |


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|  |  |  | They were $\qquad$ amazed at the turn of events. <br> (A) quiet <br> (B) quite <br> (C) solemn <br> (D) rightful |  |
| 102 | 21-01-2021 | 100 | Choose the correct alternative which can be substituted for the below given sentence: <br> 'A person of good understanding knowledge and reasoning power' <br> (A) Expert <br> (B) Snob <br> (C) Literate <br> (D) Intellectual | (D) |
| 102 | 21-01-2021 | 101 | 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work? <br> (A) 10 <br> (B) 13 <br> (C) 16 <br> (D) 18 | (B) |
| 102 | 21-01-2021 | 102 | A person walking at 4 Kmph reaches his office 8 minutes late. If he walks at 6 Kmph , he reaches there 8 minutes earlier. How far is the office from his house? <br> (A) $41 / 5 \mathrm{Km}$ <br> (B) $21 / 5 \mathrm{Km}$ <br> (C) $31 / 5 \mathrm{Km}$ <br> (D) $51 / 5 \mathrm{Km}$ | (C) |


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| 102 | 21-01-2021 | 103 | The length of a rectangular plot is 20 metres more than its breadth. If the cost of fencing the plot @ 26.50 per metre is Rs. 5300 , what is the length of the plot in metres? <br> (A) 60 <br> (B) 50 <br> (C) 40 <br> (D) 30 | (A) |
| 102 | 21-01-2021 | 104 | A is twice as good as workman $B$ and together they finish a piece of work in 18 days. In how many days will B alone finish the work? <br> (A) 27 days <br> (B) 68 days <br> (C) 56 days <br> (D) 54 days | (D) |
| 102 | 21-01-2021 | 105 | The least number, which when divided by 12,15 , 20 and 54 leaves in each case a remainder of 8 is: <br> (A) 544 <br> (B) 548 <br> (C) 504 <br> (D) 536 | (B) |
| 102 | 21-01-2021 | 106 | Find the number which when multiplied by 15 is increased by 196 . <br> (A) 10 <br> (B) 12 <br> (C) 14 <br> (D) 16 | (C) |
| 102 | 21-01-2021 | 107 | If the length of a rectangle is halved and its breadth is tripled, what is the percentage change in its area? | (A) |


| 2/12/2021 | 202.1 | 32/pos | qp_check_dashboard.php?exam=cGFvbmNvbnRyYWNoYmFzaXM | phbjlx |
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|  |  |  | (A) $50 \%$ increase <br> (B) $25 \%$ increase <br> (C) $25 \%$ decrease <br> (D) $50 \%$ decrease |  |
| 102 | 21-01-2021 | 108 | A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is: <br> (A) $3: 1$ <br> (B) $3: 2$ <br> (C) $4: 3$ <br> (D) $2: 1$ | (A) |
| 102 | 21-01-2021 | 109 | Average of 10 matches is 32 . How many runs one should score to increase his average by 4 runs? <br> (A) 70 <br> (B) 78 <br> (C) 80 <br> (D) 76 | (D) |
| 102 | 21-01-2021 | 110 | Ten years ago, P was half of Q 's age. If the ratio of their present ages is $3: 4$, what will be the total of their present ages? <br> (A) 45 <br> (B) 40 <br> (C) 35 <br> (D) 30 | (C) |
| 102 | 21-01-2021 | 111 | The wavelength of the light emitted and its color depends on the <br> (A) forward voltage | (C) |

(B) forward current
(C) band gap energy of the material forming p-n junction
(D) frequency

The feedback element in an ideal op-amp integrator is
(A) resistor
(B) capacitor
(B)
(C) zener diode
(D) voltage divider

As the modulation level is increased, the carrier power
(A) is increased
(B) remains the same
(B)
(C) is decreased
(D) None of the options

The universal gate is
(A) XOR
(B) NOT
(C)
(C) NAND
(D) OR

The number of digits in Octal system is
(A) 8
(B) 7
(A)
(C) 9
(D) 10

116 ICs are generally made of
(A)
(A) Silicon
(B) Germanium
(C) Copper
(D) Aluminium

The active components in an IC are
(A) Resistors
(B) Capacitors
(C)
(C) Transistors
(D) None of the options
(C)
(C) independent of frequency
(D) dependent of current

Load cell is used for the measurement of
(A) area
(B) force
(B)
(C) mass
(D) length

In kitchen applications, a peizoelectric crystal is used for
(A) skimming milk
(B) lighting a gas stove
(C) grinding
(D) mixing

| 102 | 21-01-2021 | 121 | Thermal runaway is <br> (A) an uncontrolled positive feedback <br> (B) a controlled positive feedback <br> (C) an uncontrolled negative feedback <br> (D) a controlled negative feedback | (A) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 122 | Where should be the bias point set in order to make transistor work as an amplifier? <br> (A) Cut off <br> (B) Active <br> (C) Saturation <br> (D) Reverse active | (B) |
| 102 | 21-01-2021 | 123 | A system has a gain of 80 db without feedback. If the negative feedback is $1 / 50$ th, what is the closed loop gain? <br> (A) 10 db <br> (B) 34 db <br> (C) 89 db <br> (D) 100 db | (B) |
| 102 | 21-01-2021 | 124 | A red-red-red-gold resistor in series with an orange-orange-orange-gold resistor produces <br> (A) 55 Kohms <br> (B) 35200 ohms <br> (C) 5005 ohms <br> (D) 500 ohms | (B) |
| 102 | 21-01-2021 | 125 | A 10 k resistor in parallel with 10 k resistor becomes <br> (A) 10 k <br> (B) 5 k | (B) |

(C) 20 k
(D) 1000 k

| 102 | 21-01-2021 | 126 | In a transformer the electrical power is transferred from one circuit to another without change in <br> (A) voltage <br> (B) current <br> (C) frequency <br> (D) number of turns | (C) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 127 | A computer cannot boot if it does not have the <br> (A) Compiler <br> (B) Loader <br> (C) Operating system <br> (D) Assembler | (C) |
| 102 | 21-01-2021 | 128 | What is the default extension for all word documents? <br> (A) TXT <br> (B) WRD <br> (C) FIL <br> (D) DOC | (D) |


| 102 | $21-01-2021$ | 129 | The output of a logic gate is"1" when all its input <br> are at logic "0", the gate is either | (A) a NAND or an EX-OR gate <br> (B) a NOR or an EX-OR gate <br> (C) an AND or an EX-NOR gate <br> (D) a NOR or an EX-NOR gate |
| :---: | :---: | :---: | :--- | :--- |
| 102 | $21-01-2021$ | 130 | What happens to total resistance in a circuit with <br> parallel resistors if one of them opens? | (A) |

(A) It increases.
(B) It halves.
(C) It remains the same.
(D) It decreases.

A coil has an inductance of 1 H if current changing at the rate of $2 \mathrm{~A} / \mathrm{s}$ induces
(A) one volt in it
(B) two volts in another coil
(C) two volts in it
(D) half a volt in it

A non-triggered oscilloscope is one which
(A) has no sweep generator
(B) cannot produce a stable stationary screen display
(C) has a continuously running time-base generator
(D) can display a portion of the input signal waveform

Cosmic noise is caused by
(A) lightning discharge
(B) solar eruptions
(C)
(C) distant stars
(D) industrial electrical discharges

A woofer should be fed from the input through a
(A) low pass filter
(B) high pass filter
(C) band pass filter

|  |  |  | (D) band stop filter |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 135 | An alternator is being synchronized to the busbars whose frequency is 50 Hz . The bulb of the synchroscope flickers at a frequency of 10 Hz . The frequency of the alternator is <br> (A) 60 Hz <br> (B) 40 Hz <br> (C) 60 Hz or 40 Hz <br> (D) 50 Hz | (C) |
| 102 | 21-01-2021 | 136 | To measure radio frequency, the suitable frequency meter is <br> (A) Weston frequency meter <br> (B) Reed vibrator frequency meter <br> (C) Heterodyne frequency meter <br> (D) Electrical resonance frequency meter | (C) |
| 102 | 21-01-2021 | 137 | Which of the following statement is WRONG in case of a multivibrator? <br> (A) output is available continuously <br> (B) feedback between two stages is $100 \%$ <br> (C) positive feedback is employed <br> (D) when one transistor is ON, the other is OFF | (A) |
| 102 | 21-01-2021 | 138 | In a dc motor if the field coil gets opened, the speed of motor will <br> (A) decrease <br> (B) come to a stop <br> (C) increase <br> (D) None of the options | (C) |
| 102 | 21-01-2021 | 139 | A thermistor | (D) |


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|  |  |  | (A) is made of a semiconductor like silicon <br> (B) has positive temperature -coefficient <br> (C) cannot be used for measuring temperatures below 0 degC <br> (D) has negative temperature coefficient |  |
| 102 | 21-01-2021 | 140 | The decimal equivalent of the hexadecimal number E5 is <br> (A) 279 <br> (B) 229 <br> (C) 427 <br> (D) 3000 | (B) |
| 102 | 21-01-2021 | 141 | What system provide accurate vessel position information to the GMDSS equipment? <br> (A) GPS <br> (B) Cospas-Sarsat <br> (C) EPIRB <br> (D) Inmarsat-A | (A) |
| 102 | 21-01-2021 | 142 | In a.c motor control, the ratio of voltage to frequency is maintained at constant value <br> (A) To make maximum use of magnetic circuit <br> (B) To minimise use of magnetic circuit <br> (C) To maximise the current drawn from the supply to provide torque <br> (D) To minimise the current drawn from the supply to provide torque | (A) |
| 102 | 21-01-2021 | 143 | Combination of two or more network topologies are called <br> (A) star | (B) |


|  |  |  | (B) hybrid <br> (C) ring <br> (D) bus |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 144 | Ladder logic programming consists primarily of <br> (A) Logic gate symbols with connecting lines <br> (B) Virtual relay contacts and coils <br> (C) Function blocks with connecting lines <br> (D) Text-based code | (B) |
| 102 | 21-01-2021 | 145 | Operation of a thermocouple is based on <br> (A) Seebeck effect <br> (B) Peltier effect <br> (C) Thomson effect <br> (D) Faraday's laws | (A) |
| 102 | 21-01-2021 | 146 | Speedometer used for measurement of speed of an automobile is <br> (A) an absolute instrument <br> (B) an indicating instrument <br> (C) a recording instrument <br> (D) a controlling instrument | (B) |
| 102 | 21-01-2021 | 147 | Highest energy savings by speed variation through use of Variable Frequency Drive is in <br> (A) Cranes <br> (B) Mills <br> (C) Centrifugal pumps <br> (D) Conveyors | (C) |
| 102 | 21-01-2021 | 148 | In AM amplifier the purpose of coupling capacitor is to | (B) |


| 2/12/2021 | 202.191.132.32/postExam/qp_check_dashboard.php?exam=cGFvbmNvbnRyYWNOYmFzaXMyMWphbjlx |  |  |  |
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|  |  |  | (A) Control the bandwidth <br> (B) Prevent DC mixing with input <br> (C) Control the output <br> (D) Match the impedance |  |
| 102 | 21-01-2021 | 149 | In AM amplifier if the output current flows for 120 degree of the input cycle, the class of the amplifier will be <br> (A) A <br> (B) B <br> (C) C <br> (D) AB | (C) |
| 102 | 21-01-2021 | 150 | Portable Digital Multimeter can normally measure <br> (A) AC Voltage (upto 415V) <br> (B) AC Current(upto 100A) <br> (C) DC voltage(Upto 24 V ) <br> (D) $4-20 \mathrm{~mA}$ | Question <br> Withdrawn |
| 102 | 21-01-2021 | 151 | Best Method for limiting of current during starting of a squirrel cage induction motor <br> (A) DOL starter <br> (B) Variable Frequency Drive <br> (C) Star delta starter <br> (D) Softstarter | (B) |
| 102 | 21-01-2021 | 152 | Exclusive-OR (XOR) logic gates can be constructed from $\qquad$ .logic gates. <br> (A) OR gates only <br> (B) AND gates and NOT gates <br> (C) AND gates, OR gates, and NOT gates | (C) |


|  |  |  | (D) OR gates and NOT gates |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 21-01-2021 | 153 | Latches constructed with NOR and NAND gates tend to remain in the latched condition due to which configuration feature? <br> (A) Low input voltages <br> (B) Synchronous operation <br> (C) Gate impedance <br> (D) Cross coupling | (D) |
| 102 | 21-01-2021 | 154 | The input stage of an Op-amp is usually a <br> (A) differential amplifier <br> (B) class B push-pull amplifier <br> (C) CE amplifier <br> (D) swamped amplifier | (A) |
| 102 | 21-01-2021 | 155 | The logic circuits whose outputs at any instant of time depends not only on the present input but also on the past outputs are called <br> (A) Combinational circuits <br> (B) Sequential circuits <br> (C) Latches <br> (D) Flip-flops | (B) |
| 102 | 21-01-2021 | 156 | A $\qquad$ is a set of rules that governs data communication. <br> (A) Protocol <br> (B) Standard <br> (C) RFC <br> (D) Server | (A) |
| 102 | 21-01-2021 | 157 | What is the maximum device handling capacity of serial standard protocol RS485 in terms of drivers | (D) |


| 2/12/2021 | 202.1 | 32/pos | qp_check_dashboard.php?exam=cGFvbmNvbnRyYWNOYmFzaX | phbjlx |
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|  |  |  | and receivers on a single line? <br> (A) 8 <br> (B) 10 <br> (C) 16 <br> (D) 32 |  |
| 102 | 21-01-2021 | 158 | Maximum distance for signal transmission on CAT6 cable without data loss <br> (A) Less than 100 metre <br> (B) Less than 200 metre <br> (C) Less than 500 metre <br> (D) Less than 2000 metre | (A) |
| 102 | 21-01-2021 | 159 | While operating on a variable frequency supplies, the ac motor requires variable voltage as well in order to <br> (A) Protect the insulation <br> (B) Avoid the effect of saturation <br> (C) Improve the capabilities of the inverter <br> (D) Protect the IGBT from $\mathrm{dv} / \mathrm{dt}$ | (B) |
| 102 | 21-01-2021 | 160 | Which of the following is not a semi conductor? <br> (A) Silicon <br> (B) Germanium <br> (C) Diamond <br> (D) Gallium arsenide | (C) |

