Subject Code : 102 V

| Subject Code | Exam Date | $\begin{aligned} & \mathbf{Q} \\ & \text { Id } \end{aligned}$ | Questions | Answer Key |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 161 | Government of India has decided to celebrate the birthday of Netaji Subhas Chandra Bose on $\qquad$ every year as "PARAKRAM DIWAS" to inspire people of the country, especially the youth, to act with fortitude in the face of adversity as Netaji did, and to infuse in them a spirit of patriotic fervour. <br> (A) 23rd January <br> (B) 3rd January <br> (C) 23rd December <br> (D) 3rd December | (A) |
| 102 | 12-02-2021 | 162 | Fouaad Mirza, who was recently seen in news, is a famous sportsperson of which event, qualified to represent India in the Tokyo Olympics? <br> (A) Javelin Throw <br> (B) Equestrian sports <br> (C) Shot put <br> (D) Boxing | (B) |
| 102 | 12-02-2021 | 163 | How is the Railway Protection Force (RPF) recently renamed by the Ministry of Railways? <br> (A) Railway Protection Service <br> (B) Indian Railway Force Service <br> (C) Indian Railway Service <br> (D) Indian Railway Protection Force Service | (D) |
| 102 | 12-02-2021 | 164 | Which Indian body recently warned against recording its sessions using mobile phones? <br> (A) Supreme Court <br> (B) Rajya Sabha | (B) |


|  |  |  | (C) RBI <br> (D) Ministry of Defence |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 165 | Chauri Chaura is a town located in which Indian state/ UT? <br> (A) Uttar Pradesh <br> (B) Punjab <br> (C) Bihar <br> (D) West Bengal | (A) |
| 102 | 12-02-2021 | 166 | Look carefully for the pattern, and then choose which pair of numbers comes next. <br> 42403835333128 <br> (A) 2730 <br> (B) 2624 <br> (C) 2623 <br> (D) 3430 | (B) |
| 102 | 12-02-2021 | 167 | A,B,C,D,E,F and G are travelling in three buses $\mathrm{X}, \mathrm{Y}, \mathrm{Z}$ with at least two of them in any of these buses. Each of them likes a different sweet viz. Petha, Rasmalai, Rasagolla, Kheer, Sandesh, Chamcham and Jalebi, but not necessarily in the same order. <br> B is travelling in bus Y with E . <br> E's favourite sweet is Jalebi. <br> Those who travel in Bus X do not like Petha and Kheer. <br> The one who likes Rasmalai travels only with G in Bus Z. <br> The one whose favourite sweet is Sandesh does not travel in the same bus with either E or G. <br> A does not travel in Bus Y. <br> A likes Chamcham. <br> D and F are travelling in the same bus. <br> F does not like Rasagolla. <br> The one whose favourite sweet is Kheer does not travel in bus Y. <br> In which bus three of them are travelling? | (B) |


| 2/16/2021 |  | 2.191 | postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdibHZI |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (A) Either X or Y <br> (B) Only X <br> (C) Only Z <br> (D) Only Y |  |
| 102 | 12-02-2021 | 168 | 'Reading' is related to 'knowledge' in the same way as 'Work' is related to: <br> (A) Money <br> (B) Employment <br> (C) Experience <br> (D) Engagement | (C) |
| 102 | 12-02-2021 | 169 | Find the day of the week on 27th Dec 1985. <br> (A) Sunday <br> (B) Monday <br> (C) Friday <br> (D) Thursday | (C) |
| 102 | 12-02-2021 | 170 | In a row of 20 persons, the position of Riya from the left side of the row is 6th. Find the no. of persons after Riya in the row? <br> (A) 14 <br> (B) 15 <br> (C) 16 <br> (D) 17 | (A) |
| 102 | 12-02-2021 | 171 | Rearrange the jumbled letters to make meaningful words and then select the one which is different. <br> (A) OMESU <br> (B) ROTINOM <br> (C) RETNIRP | (D) |


|  |  |  | (D) RETIAW |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 172 | Choose the synonym of the word "AUGUST" <br> (A) Common <br> (B) Dignified <br> (C) Ridiculous <br> (D) Petty | (B) |
| 102 | 12-02-2021 | 173 | 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": <br> Because of the Internet, working at jobs at home have become much more common. <br> (A) has become <br> (B) had become <br> (C) may become <br> (D) No correction | (A) |
| 102 | 12-02-2021 | 174 | Fill up with the correct preposition: <br> I will have finished this project $\qquad$ Friday. <br> (A) by <br> (B) from <br> (C) since <br> (D) on | (A) |
| 102 | 12-02-2021 | 175 | Complete the following sentence meaningfully with options given: <br> There is a general $\qquad$ in the State that our ethics are declining and that our moral standards are $\qquad$ <br> (A) optimism, improving | (D) |


|  |  |  | (B) idea,futile <br> (C) feeling, normalising <br> (D) complaint, deteriorating |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 176 | What is the correct meaning of the underlined phrase in the following sentence: <br> My friend had the special right or advantage of visiting England as the official guest of the Queen. <br> (A) reputation <br> (B) masterpiece <br> (C) extravagance <br> (D) privilege | (D) |
| 102 | 12-02-2021 | 177 | Antonym of Admire <br> (A) cheerful <br> (B) detest <br> (C) clumsy <br> (D) dismay | (B) |
| 102 | 12-02-2021 | 178 | Select the correct sentence. <br> (A) If the cab had started on time, she would have reached office on time. <br> (B) If the cab would have been started on time, she had reached office on time. <br> (C) If the cab would have started on time, she would have reached the office on time. <br> (D) If the cab would have started on time, she had reached office on time. | (A) |
| 102 | 12-02-2021 | 179 | Choose the correct alternative which can be substituted for the below given sentence: <br> The sales manager tried every trick in the book to sell the flat to my uncle, but they failed. | (C) |

(A) Try to give the least discount
(B) Not ready to bargain
(C) Try every possible way
(D) Stuck in the midway

Choose the correct alternative which can be substituted for the below given clause:
'Lasting for a very short time'
(A) Gregarious
(B) Snob
(C) Ephemeral
(D) Belligerent

12 men or 15 women can finish a work in 24 days, in how many days can the same work be finished by 8 men and 8 women?
(A) 20
(B) 15
(C) 22
(D) 12

Aan can cover a certain distance in 42 minutes. He covers two thirds of it at $4 \mathrm{Km} / \mathrm{hr}$ and the remaining $5 \mathrm{Km} / \mathrm{hr}$. The total distance is
(A) 3 km
(B) 9 km
(C) 1 km
(D) 4.5 km

183 Within a rectangular garden 10 m wide and 20 m
long, we wish to pave a walk around the borders of uniform width so as to leave an area of $96 \mathrm{~m}^{2}$ for flowers. How wide should the walk be?

| 2/16/2021 |  | .191. | 2/postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdIbHZI |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (A) 1 m <br> (B) 2 m <br> (C) 3 m <br> (D) 4 m |  |
| 102 | 12-02-2021 | 184 | A boat can travel with a speed of $13 \mathrm{~km} / \mathrm{hr}$ in still water. If the speed of the stream is $4 \mathrm{~km} / \mathrm{hr}$, find the time taken by the boat to go 68 km downstream. <br> (A) 3 hours <br> (B) 4 hours <br> (C) 5 hours <br> (D) 8 hours | (B) |
| 102 | 12-02-2021 | 185 | If 120 is $20 \%$ of a number, then $120 \%$ of that number will be : <br> (A) 560 <br> (B) 720 <br> (C) 680 <br> (D) 480 | (B) |
| 102 | 12-02-2021 | 186 | A, B, C enter into a partnership investing Rs. 35,000 and Rs. 45,000 and Rs. 55,000 respectively. The respectively shares of $A, B, C$, in an annual profit of Rs. 40,500 are: <br> (A) Rs. 10,500, Rs. 13,500 , Rs. 16,500 <br> (B) Rs. 11,500, Rs. 13,000, Rs. 16,000 <br> (C) Rs. 11,000, Rs. 14,000, Rs. 15,500 <br> (D) Rs. 11,500 , Rs. 12,500 , Rs. 16,500 | (A) |
| 102 | 12-02-2021 | 187 | Two pipes fill a tank in 10 hours and 12 hours respectively, while a third pipe empties the full tank in 20 hours. If all the three pipes operate simultaneously, in how much time the tank will be filled? | (C) |


| 2/16/2021 |  | 2.191. | 2/postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdIbHZI <br> (A) 7 hours <br> (B) 8 hours <br> (C) 7 hrs. 30 minutes <br> (D) 8 hrs. 30 minutes |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 188 | A typist uses a sheet measuring 20 cm by 30 cm lengthwise. If a margin of 2 cm is left on each side and a 3 cm margin on top and bottom, then percent of the pages used for typing <br> (A) 35 <br> (B) 55 <br> (C) 64 <br> (D) 71 | (C) |
| 102 | 12-02-2021 | 189 | In a class with a certain number of students if one new student weighing 50 kg is added, then average weight of class is increased by 1 kg . If one more student weighing 50 kg is added, then the average weight of the class increases by 1.5 kg over the original average. What is the original average weight (in kg ) of the class? <br> (A) 46 <br> (B) 42 <br> (C) 45 <br> (D) 47 | (D) |
| 102 | 12-02-2021 | 190 | In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B , the present age of $B$ is: <br> (A) 19 <br> (B) 29 <br> (C) 39 <br> (D) 10 | (C) |
| 102 | 12-02-2021 | 191 | When do we use super node technique: | (B) |

(A) current source branch is common for two meshes.
(B) ideal voltage source is connected between two non reference nodes
(C) ideal voltage source is connected between non reference node and reference node
(D) All of the options

Which of the following statement is true:
(A) The current in the discharging capacitor grows linearly
(B) The current in the discharging capacitor grows exponentially
(C) The current in the discharging capacitor decays exponentially
(D) The current in the discharging capacitor decreases linearly

While calculating Rth in Thevenin \& Norton equivalent:
(A) all independent sources are made dead
(B) only independent current sources are made dead
(C) only independent voltage sources are made dead
(D) None of the options

A good voltage regulation of a transformer means:
(A) output voltage fluctuation from no load to full load is least
(B) output voltage fluctuation with power factor is least
(C) difference between primary and secondary voltage is least
(D) difference between primary and secondary voltage is maximum

| 102 | 12-02-2021 | 195 | The essential condition of parallel operation of 2 DC generators is that they should have: <br> (A) same KW rating <br> (B) same operation rpm <br> (C) same drooping characteristics <br> (D) All of the options | (C) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 196 | The direction of a DC series motor can be changed by: <br> (A) Interchanging supply terminals <br> (B) Interchanging field terminals <br> (C) either Interchanging supply terminals or Interchanging field terminals <br> (D) Any of the options | (B) |
| 102 | 12-02-2021 | 197 | In capacitor start single phase motors: <br> (A) current in starting winding leads the voltage <br> (B) current in starting winding lags the voltage <br> (C) current in starting winding is in phase with voltage in running winding <br> (D) None of the options | (A) |
| 102 | 12-02-2021 | 198 | A synchronous motor is running on a load with normal excitation.Now if load on motor is increased: <br> (A) power factor as well as armature current will increase <br> (B) power factor as well as armature current will decrease <br> (C) power factor will decrease and armature current will increase <br> (D) power factor will increase and armature current will decrease | (C) |
| 102 | 12-02-2021 | 199 | The skin effect of a conductor will reduce as: | (A) |


(A) Y is more sensitive
(B) X is more sensitive
(C) Both X \& Y are equally sensitive
(D) It would not be possible to assess the sensitivity on the basis of given data

The time required for a gate to change its output is called as:
(A) Decay time
(B) start time
(C) run time
(D) propagation time

The program counter in a 8085 micro-processor is a 16-bit register, because
(A) It counts 16 -bits at a time
(B) There are 16 address lines
(C) It facilitates the user storing 16-bit data temporarily
(D) It has to fetch two 8-bit data at a time

Which of these sets of logic gates are designated as universal gates?
(A) NOR,NAND
(B) XOR,NOR,NAND
(C) OR,NOT,AND
(D) NOR,NAND,XNOR
(A) Linear, Non Linear and time variant responses
(B) Linear \& Non linear responses only
(C) Linear responses only

| 2/16/2021 |  | 2.191 | /postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdibHZI |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (D) None of the options |  |
| 102 | 12-02-2021 | 208 | Energy stored by a coil is doubled when its current is increased by $\qquad$ percent. <br> (A) 45.4 <br> (B) 50 <br> (C) 41.4 <br> (D) 100 | (C) |
| 102 | 12-02-2021 | 209 | For the same peak value which of the following wave will have the highest R.M.S value ? <br> (A) Half wave rectified sine wave <br> (B) Square wave <br> (C) Triangular wave <br> (D) Sine wave | (B) |
| 102 | 12-02-2021 | 210 | The starting torque of squirrel cage induction motor is $\qquad$ <br> (A) low <br> (B) negligible <br> (C) same as full load torque <br> (D) slightly more than full load torque | (A) |
| 102 | 12-02-2021 | 211 | Zero power factor method for an alternator is generally used to determine ...... <br> (A) Efficiency of alternator <br> (B) Synchronous impedence of alternator <br> (C) Voltage regulation of the alternator <br> (D) None of the options | (C) |
| 102 | 12-02-2021 | 212 | At leading power factor, the armature flux in an alternator ..... | (B) |


| 2/16/2021 |  | . 191 | /postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdlbHZI |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (A) distorts the rotor flux <br> (B) aids the rotor flux <br> (C) opposes the rotor flux <br> (D) Does not affect the rotor flux |  |
| 102 | 12-02-2021 | 213 | If string efficiency is $100 \%$ it means that <br> (A) potential across each disc is zero <br> (B) potential across each disc is same <br> (C) one of the insulator disc is shorted <br> (D) one of the insulator disc is removed | (B) |
| 102 | 12-02-2021 | 214 | Air Blast circuit breakers are used for .... <br> (A) overcurrents <br> (B) short duty <br> (C) intermittant duty <br> (D) repeated duty | (D) |
| 102 | 12-02-2021 | 215 | The principle of operation of three phase induction motor closely resembles to that of which of the following? <br> (A) Synchronous motor <br> (B) DC series motor <br> (C) Transformer with short circuited secondary <br> (D) Transformer with open circuited secondary | (C) |
| 102 | 12-02-2021 | 216 | Which harmonics will be totally eliminated in an alternator by using a fractional pitch of $4 / 5$ ? <br> (A) third <br> (B) fifth <br> (C) seventh <br> (D) ninth | (B) |


| 102 | 12-02-2021 | 217 | The active recovery voltage of circuit breaker depends upon which factor ...... <br> (A) power factor <br> (B) armature reaction <br> (C) circuit conditions <br> (D) All of the options | (D) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 218 | Thickness of the layer of insulation on the conductor, in cables depends on <br> (A) reactive power <br> (B) power factor <br> (C) voltage <br> (D) current carrying capacity | (C) |
| 102 | 12-02-2021 | 219 | Which of the following meter has the best accuracy..... <br> (A) Thermocouple <br> (B) moving-coil <br> (C) moving-iron <br> (D) Rectifier | (B) |
| 102 | 12-02-2021 | 220 | The minimum number of wattmeters required to measure power in an unbalanced three wire system..... <br> (A) 1 <br> (B) 2 <br> (C) 3 <br> (D) 4 | (B) |
| 102 | 12-02-2021 | $221$ | Common Mode Rejection Ratio for a differential amplifier should be..... <br> (A) zero | (D) |


| 2/16/2021 | 202.191.132.32/postExam/qp_check_dashboard.php?exam=Y29jaGluZmVidHdibHZı |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (B) unity <br> (C) small <br> (D) large |  |
| 102 | 12-02-2021 | 222 | ROM has a ..... <br> (A) multiplexer followed by a decoder <br> (B) demultiplexer followed by an encoder <br> (C) decoder followed by an encoder <br> (D) multiplexer followed by an encoder | (C) |
| 102 | 12-02-2021 | 223 | gate is a two level logic gate. <br> (A) AND <br> (B) NAND <br> (C) NOT <br> (D) Ex. OR | (D) |
| 102 | 12-02-2021 | 224 | The heart of Analog to Digital converter is <br> (A) Clock pulse <br> (B) pulse generator <br> (C) current source <br> (D) comparator | (D) |
| 102 | 12-02-2021 | 225 | A fuse is never inserted in .... <br> (A) neutral wire <br> (B) negative of DC circuit <br> (C) positive of DC circuit <br> (D) phase line | (A) |
| 102 | 12-02-2021 | 226 | The essential condition for parallel operation of two D.C. generators is that they have | (D) |


|  |  |  | (A) Same kW rating <br> (B) The same operation r.p.m <br> (C) Same percentage regulation <br> (D) The same drooping voltage characteristics |  |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 227 | Which of the following generator will have negligible terminal voltage while running on no-load <br> (A) Compound generator <br> (B) Shunt generator <br> (C) Series generator <br> (D) Separately excited generator | (C) |
| 102 | 12-02-2021 | 228 | No-load speed of which of the following motor is highest <br> (A) Differentially compound motor <br> (B) Cumulative compound motor <br> (C) Shunt Motor <br> (D) Series Motor | (D) |
| 102 | 12-02-2021 | 229 | DOL starter can be used for which motors? <br> (A) Up to 5 H.P <br> (B) Up to 10 H.P <br> (C) Up to 15 H.P <br> (D) Up to 20 H.P | (A) |
| 102 | 12-02-2021 | 230 | Why starters are required in a DC motor <br> (A) Back emf of these motors is zero initially <br> (B) These motors are not self-starting <br> (C) These motors have high starting torque <br> (D) To restrict armature current as there is no back emf at starting | (D) |


| 102 | 12-02-2021 | 231 | A moving iron type ammeter has few turns of thick wire so that <br> (A) Sensitivity is high <br> (B) Resistance is less <br> (C) Damping is effective <br> (D) Scale is large | (B) |
| :---: | :---: | :---: | :---: | :---: |
| 102 | 12-02-2021 | 232 | A switch is a device that <br> (A) short circuits complex circuits <br> (B) holds a fuse <br> (C) opens or completes a current path <br> (D) has double poles | (C) |
| 102 | 12-02-2021 | 233 | A short circuit will have <br> (A) a small current flow <br> (B) a large current flow <br> (C) no current flow <br> (D) some current flow | (B) |
| 102 | 12-02-2021 | 234 | The basic difference between a fuse and a circuit breaker is <br> (A) a circuit breaker is reusable <br> (B) a circuit breaker is more reliable <br> (C) a fuse is reusable <br> (D) a fuse is slower | (A) |
| 102 | 12-02-2021 | 235 | The size of a conductor used in power cables depends on the <br> (A) operating voltage <br> (B) power factor | (C) |


(
(A) MAN
(B) WAN
(C) LAN
(D) All of the options

