PROVISIONAL ANSWER KEY

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Question1:-Which of the following is not a component of the conducting system of heart ?

    A:-SA Node

    B:-Bundle of His

    C:-Chordae tendineae

    D:-Purkinje fibres

    Correct Answer:- Option-C

Question2:-Which of the following part of myofibril is the 'sarcomere' ?

    A:-Between the A & H band

    B:-Between two adjacent 'Z' lines

    C:-Between A & I band

    D:-Between two adjacent 'M' lines

    Correct Answer:- Option-B

Question3:-Bipolar neurons are found in

    A:-Autonomic ganglia

    B:-Olfactory epithelium

    C:-Motor area of cerebral cortex

    D:-Sensory ganglia of dorsal root of spinal cord

    Correct Answer:- Option-B

Question4:-Which of the following is an example of cartilaginous joint ?

    A:-Sutures

    B:-Syndes mosis

    C:-Symphysis

    D:-Gomphosis

    Correct Answer:- Option-C

Question5:-Which of the following cells are responsible for myelination of optic nerve ?

    A:-Schwann cell

B:-Ependymal cells

C:-Satellite cells

D:-Oligodendroglia

Correct Answer:- Option-D

Question6:-Which of the following cells produce surfactant ?

A:-Type I Pneumocytes

B:-Type II Pneumocytes

C:-Alveolar macrophages

D:-Kulchitsky cells

Correct Answer:- Option-B

Question7:-Which of the following statement is not true about Cytoskeleton ?

A:-They are membrane bounded structure within the cytoplasm

B:-They determine general cell shapes

C:-They control internal movement of cytoplasm

D:-They support specialized extensions of cell surface like cilia and flagella

Correct Answer:- Option-A

Question8:-Which of the following is not a function of limbic system ?

A:-Species preservation

B:-Maintenance of equilibrium and posture

C:-Learning and retention of recent memory

D:-Regulation of autonomic and endocrine function

Correct Answer:- Option-B

Question9:-Which of the following plasma protein is responsible for blood coagulation ?

A:-Albumin

B:-Globulin

C:-Fibrinogen

D:-None of the above

Correct Answer:- Option-C

Question10:-Which of the following hormone is secreted by Adrenal medulla ?

A:-Serotonin

B:-Calcitonin

C:-Aldosteron

D:-Catecholamines

Correct Answer:- Option-D

Question11:-What is the usual range of the thickness of the electric double layers ?

A:-0.1 − 0.4 nm

B:-0.1 − 0.4 mm

C:-0.1 − 0.4µm

D:-0.1− 0.4pm

Correct Answer:- Option-A

Question12:-Find the appropriate order of the catalytic activity of the following metals :

A:-Pb < Zn < Ag < Pt < Fe

B:-Pb < Zn < Ag < Fe < Pt

C:-Zn < Pb < Ag < Fe < Pt

D:-Pb < Zn < Fe < Ag < Pt

Correct Answer:- Option-B

Question13:-Which of the following factor can influence half-wave potential ?

A:-Temperature

B:-pH

C:-Diffusion properties

D:-All of these

Correct Answer:- Option-D

Question14:-Calculate using Nernst equation cell potential of the following electrochemical cell at 298K.

Zn(s)|$Zn^{2+}_{(aq)(0.1M)}$||Cu^{2+} (aq)|Cu(s) (0.01 M); Given $E^0_{Zn^{2+}|Zn} = -0.76V, E^0_{Cu^{2+}|Cu} = 0.35V$

A:-1.11V

B:-1.08 V

C:-0.96 V

D:-2 V

Correct Answer:- Option-B

Question15:-What equation is not associated with ionic transport ?

A:-Nernst-Planck Equation

B:-Goldman-Hodgkin-Katz flux Equation

C:-Cottrell Equation

D:-Hodgkin-Huxley Equation

Correct Answer:- Option-C

Question16:-What is the purpose of using a salt bridge in an electrochemical cell with a reference electrode ?

A:-To increase the internal resistance of the cell

B:-To reduce the potential of the reference electrode

C:-To connect the reference electrode to the working electrode

D:-To maintain electrical neutrality in the cell

Correct Answer:- Option-D

Question17:-Within the following statements about ECG acquisition, which one is not correct ?
i) In standard unipolar chest lead configuration, V5-V6 corresponds to anterolateral leads.
ii) No exploratory electrodes are considered in unipolar chest lead configuration.
iii) Augmented unipolar limb configuration leads to increased amplitude of ECG signals

A:-i

B:-ii

C:-iii

D:-all three

Correct Answer:- Option-B

Question18:-In case of an impaired SA node, what phenomena could be observed in ECG signal ?

A:-ectopic beats

B:-ventricular bigeminy

C:-none of A and B

D:-both A and B

Correct Answer:- Option-D

Question19:-What is the usual frequency range of the mu rhythm manifested in EEG signals ?

A:-7-11 Hz

B:-1-4 Hz

C:-15-25 Hz

D:->35 Hz

Correct Answer:- Option-A

Question20:-What is the typical range of amplitude of single motor unit action potential ?

A:-1-3 mV

B:-100-300 mV

C:-100-300 µV

D:-1-3 µV

Correct Answer:- Option-C

Question21:-In microvessels, blood exhibits different rheological behavior compared to larger vessels primarily due to

A:-Increased viscosity at higher shear rate

B:-Reduced viscosity at lower shear rates

C:-Enhanced elasticity under pulsatile flow conditions

D:-Decreased compliance in vessel walls

Correct Answer:- Option-B

Question22:-For a person at rest, what is the percentage of blood present in capillaries ?

    A:-10%

    B:-12%

    C:-5%

    D:-2%

    Correct Answer:- Option-C

Question23:-Which of the following forces favor(s) the movement of surrounding interstitial fluid into the capillary lumen (i.e, fluid absorption into the capillary) ?

    A:-Hydrostatic blood pressure in the capillary

    B:-Colloid osmotic pressure of the interstitial fluid surrounding the capillary

    C:-Hydrostatic pressure of the interstitial fluid surrounding the capillary

    D:-Colloidal pressure of fluid

    Correct Answer:- Option-C

Question24:-The capillaries hydrostatic pressure is 29 mmHg and interstitial hydrostatic pressure is 2 mmHg, while capillaries oncotic pressure is 23 mmHg and interstitial oncotic pressure is 0.5 mmHg. Calculate the net force and what will happen ?

    A:-5.5 (filtration)

    B:--4 (reabsorption)

    C:-4.5 (reabsorption)

    D:-4.5 (filtration)

    Correct Answer:- Option-D

Question25:-Mass of the pulmonary blood of a person is 1.5 kg, find the actual weight of the person.

    A:-75 kg

    B:-97 kg

    C:-107 kg

    D:-125 kg

    Correct Answer:- Option-C

Question26:-Find the kinetic energy (KE) of 2 g of blood leaving aorta of radius 1.2 cm.

    A:-$8 \times 10^{-5} J$

    B:-$9 \times 10^{-5} J$

    C:-$12 \times 10^{-5} J$

D:-12.5×$10^{-5}J$

Correct Answer:- Option-A

Question27:-For improving biocompatibility of implants, which type of coating has been found to resist protein adsorption and cell adhesion ?

A:-Hydrophobic coatings

B:-Albumin coatings

C:-Polyethylene oxide coatings

D:-Fibronectin coatings

Correct Answer:- Option-C

Question28:-Which method introduces reactive groups on polymeric surfaces to modify biomaterial surfaces ?

A:-Plasma gas discharge

B:-Hydrophobic coating

C:-Hydrophilic coating

D:-Saline perfusion

Correct Answer:- Option-A

Question29:-What property makes hydrophilic coatings popular in biomaterials ?

A:-High protein adsorption

B:-Low interfacial tension in biological environments

C:-Enhanced cell adhesion

D:-Resistance to blood flow

Correct Answer:- Option-B

Question30:-The distance between implant and adjustment tooth should be at least

A:-2.5 mm

B:-1.5 mm

C:-3.5 mm

D:-3.75 mm

Correct Answer:- Option-B

Question31:-Which is /are the correct sentences about implantable defibrillators ?

A:-It is surgically placed in the chest

B:-They are not preprogramed to automatically detect arrhythmia

C:-They send a low-energy electric charge

D:-Both A and C

Correct Answer:- Option-A

Question32:-The life time of lithium iodide battery used in cardiac pacemakers.

A:-2-3 years

B:-7-8 years

C:-10-12 years

D:-4-5 years

Correct Answer:- Option-B

Question33:-The shock duration of 4-8 ms for an efficient defibrillation results in approximately

A:-Less than 5

B:-10-15 J

C:-30-35 J

D:-J more than 50 J

Correct Answer:- Option-C

Question34:-The frequency of operation of solid state diathermy machines is

A:-1 KHz-10 KHz

B:-100 KHz-500 KHz

C:-250 KHz-1 MHz

D:-1 MHz-10 MHz

Correct Answer:- Option-C

Question35:-Which factor can be used for varying the dosage of ultrasound heating ?

A:-Frequency of ultrasound

B:-Intensity of ultrasound

C:-Duration of the exposure

D:-All of the above

Correct Answer:- Option-D

Question36:-Calculate the Dialysance If the blood flow rate to kidney is 100 ml/min, and the drug concentration in arterial blood and venous blood are 100 mg/ml and 50 mg/ml.

A:-100 ml/min

B:-75 ml/min

C:-50 ml/min

D:-10 ml/min

Correct Answer:- Option-C

Question37:-The radiation absorbed dosage can be measured in

A:-Sievert (Sv)

B:-Gray (Gy)

C:-Both A and B

D:-None of the above

Correct Answer:- Option-B

Question38:-Diagnostic procedure to view the inner surface of blood vessels

A:-Capsule endoscopy

B:-fMRI

C:-Digital subtraction angiography

D:-Digital addition angiography

Correct Answer:- Option-C

Question39:-i) laparoscopic surgery - lung disease
ii) arthroscopic surgery - joint diseases
iii) endoscopy-body cavities or tissue areas
Which is/are correct match/es ?

A:-All are correct

B:-Both i) and ii) are correct

C:-Both ii) and iii) are correct

D:-Both i) and iii) are correct

Correct Answer:- Option-C

Question40:-Radioactive sources used for brachytherapy

A:-iridium-194

B:-iodine-122

C:-iridium-190

D:-iodine-125

Correct Answer:- Option-D

Question41:-Which technique can be used to measure the metabolic activity of cell of the tissues ?

A:-MRI

B:-PET

C:-CT

D:-
All of the above

Correct Answer:- Option-B

Question42:-What colour is water in a T1 weighted MRI scan ?

A:-White

B:-Black

C:-Dark grey

D:-Light grey

Correct Answer:- Option-C

Question43:-What is the maximum strength of magnet approved for medical imaging of patient ?

A:-0.5 T

B:-1.5 T

C:-5.0 T

D:-3.0 T

Correct Answer:- Option-D

Question44:-Which of these is a disadvantages of MRI ?

A:-High dose of ionizing radiation

B:-Two-dimensional images

C:-Unsuitable for pacemaker wearers

D:-Shows vasculature without contrast

Correct Answer:- Option-C

Question45:-As compared to SPECT, PET isotopes have _____ half life.

A:-longer

B:-shorter

C:-equivalent

D:-unstable

Correct Answer:- Option-B

Question46:-The most preferred radioisotope element for SPECT is

A:-Tc

B:-W

C:-Mo

D:-Ba

Correct Answer:- Option-A

Question47:-Which ultrasound mode is used to generate a two dimensional greyscale image ?

A:-A mode

B:-B Mode

C:-Doppler mode

D:-M mode

Correct Answer:- Option-B

Question48:-If you want to get good quality coronary CT angiogram, which kind of patient characteristics is ideal ?

A:-Atrial fibrillation with a low ventricular response

B:-High body mass index

C:-Ability to breath hold for 2-3 seconds maximum

D:-Ability to hold arms straight above the head

Correct Answer:- Option-D

Question49:-PET-MRI scans helps doctors make a diagnosis for

A:-epilepsy

B:-brain tumors

C:-both A and B

D:-heart block

Correct Answer:- Option-C

Question50:-Which of these is the disadvantages of PET-CT scan ?

A:-Identification of small cancerous formations in the body

B:-diagnosis time is large

C:-cost of producing and transporting the radiopharmaceuticals

D:-the risk of radioactive substance

Correct Answer:- Option-C

Question51:-How many Special Function Registers are present in the 8051 microcontroller ?

A:-16

B:-20

C:-21

D:-32

Correct Answer:- Option-C

Question52:-Find the value in A, the accumulator, after the following 8051 code.
MOV A, #9AH
MOV R0, #53H
CLR C
SUBB A, R0
SWAP A

A:-04

B:-40

C:-47

D:-74

Correct Answer:- Option-D

Question53:-If the Nyquist rate for x(t) is Fs, what is the Nyquist rate of the signal x(2t) ?

A:-$F_s/2$

B:-F_s

C:-$2F_s$

D:-$4F_s$

Correct Answer:- Option-C

Question54:-Which of the following is used to measure Inductance of an inductor with a high Q factor ?

    A:-Hay's Bridge

    B:-Wien's Bridge

    C:-Maxwell's Bridge

    D:-Kelvin Bridge

    Correct Answer:- Option-A

Question55:-In a reluctance motor, at what angle is the maximum average torque observed ?

    A:-30

    B:-45

    C:-60

    D:-90

    Correct Answer:- Option-B

Question56:-Decimal equivalent of Hexadecimal number (A5) is

    A:-105

    B:-115

    C:-165

    D:-95

    Correct Answer:- Option-C

Question57:-Which of the following is equivalent to the Boolean expression f(A, B, C) = A + BC ?

    A:-A + B + AC

    B:-(A + B) (A + C)

    C:-AC + BC + C

    D:-AB + BC + B

    Correct Answer:- Option-B

Question58:-MOSFET stands for

    A:-metal oxide semiconductor film effect transistor

    B:-metal oxide silicon film effect transistor

    C:-metal oxide silicon field effect transistor

    D:-metal oxide semiconductor field effect transistor

    Correct Answer:- Option-D

Question59:-Given a BJT in a common emitter transistor configuration, the dc current gain is 49 and emitter current is 10mA. What are the base current and collector current ?

    A:-0.2 mA, 9.8 mA

B:-0.4 mA, 9.6 mA

C:-0.4 mA, 10 mA

D:-0.5 mA, 10 mA

Correct Answer:- Option-A

Question60:-Binary equivalent of octal number (24) is

A:-010100

B:-011000

C:-011010

D:-110100

Correct Answer:- Option-A

Question61:-A strain gauge wire of length 100 mm long and has an initial resistance of 120Ω.On applying a force , the wire resistance increases by 0.18Ω and length of 0.1 mm. Calculate the gauge factor.

A:-0.67

B:-1

C:-1.5

D:-1.75

Correct Answer:- Option-C

Question62:-Determine the output voltage of an LVDT for a displacement of 6 mm from its central position, given that this LVDT produces a secondary voltage of 3.3 V for a displacement of ±11 mm.

A:-0.2 V

B:-0.55 V

C:-1.8 V

D:-2 V

Correct Answer:- Option-C

Question63:-Which of the following is an active transducer ?

A:-Thermocouple

B:-Thermistor

C:-LVDT

D:-RTD

Correct Answer:- Option-A

Question64:-Which of the electrochemical sensor use ion selective electrodes to determine changes in the concentration of chosen ions ?

A:-Conductometric biosensors

B:-Amperometric biosensors

C:-Potentiometric biosensors

D:-None of the above

Correct Answer:- Option-C

Question65:-Antigen-antibody interactions do not depend on which type of interaction ?

A:-Covalent bonds

B:-Ionic bonds

C:-Hydrophobic interactions

D:-Hydrogen bonds

Correct Answer:- Option-A

Question66:-Which form of luminescence occurs with photoexcitation via photon absorption ?

A:-Bioluminescence

B:-Photoluminescence

C:-Chemiluminescence

D:-Electroluminescence

Correct Answer:- Option-B

Question67:-Which of the following is an optical biosensor ?

A:-Piezoelectric

B:-Amperometric

C:-Potentiometric

D:-Surface Plasmon Resonance

Correct Answer:- Option-D

Question68:-Which type of transducer operates on the principle that the distance between two parallel plates is varied by an externally applied force ?

A:-Variable capacitance pressure gauge

B:-Thermistor

C:-Piezoelectric Transducer

D:-Strain Gauge

Correct Answer:- Option-A

Question69:-Which component is commonly found in biosensors for detecting specific biological
substances ?

A:-Immobilized enzymes

B:-Metal sensing devices

C:-Optical fibers

D:-Free enzymes

Correct Answer:- Option-A

Question70:-A thin wire of soft iron has a gauge factor of 2.5. What is the Poisson's ratio of the soft iron ?

    A:-0

    B:-0.5

    C:-0.75

    D:-1.25

    Correct Answer:- Option-C

Question71:-What is the relation between Absorbance (A) and Transmittance (%T) ?

    A:-A = 2 log(%T)

    B:-A = log(1/%T)

    C:-A = log (%T)-2

    D:-A = 2 - log(%T)

    Correct Answer:- Option-D

Question72:-Match the following ion-selective electrodes with respective electrolytes ?
i) Glass electrodes   a) Bromide and Iodide
ii) Solid State electrodes   b) Ammonia
iii) Liquid-Liquid electrodes   c) Potassium, Silver
iv) Gas Sensing electrodes   d) Calcium, Magnesium

    A:-i-a, ii-b, iii-c, iv-d

    B:-i-c, ii-a, iii-d, iv-b

    C:-i-a, ii-d, iii-c, iv-b

    D:-i-c, ii-b, iii-d, iv-a

    Correct Answer:- Option-B

Question73:-Which of the following is correct about Chemiluminescence Immuno Assay (CLIA) versus Enzyme Linked Immuno Sorbent Assay (ELISA) ?
i) CLIA offers better signal to noise and sensitivity
ii) CLIA involves more complex instrumentation
iii) CLIA has wider dynamic range
iv) Enzyme labels can be used in CLIA as in the case of ELISA

    A:-i, ii and iii

    B:-i, ii and iv

    C:-i, iii and iv

    D:-ii, iii and iv

    Correct Answer:- Option-C

Question74:-What is the range of applicability of coulter principle used for blood cell counters ?

    A:-0.5 microns to 500 microns

    B:-0.5 nanometres to 500 nanometres

C:-50 microns to 500 microns

D:-5 nanometres to 500 nanometres

Correct Answer:- Option-A

Question75:-Which of the following chromatographic method is different from the rest three ?

A:-Thin-Layer Chromatography

B:-Paper Chromatography

C:-Planar Chromatography

D:-High performance liquid Chromatography

Correct Answer:- Option-D

Question76:-What are the vertices of the Einthoven triangle used for defining ECG leads ?

A:-RA, RL and LL

B:-RA, LA and LL

C:-LA, RL and LL

D:-LA, RA and RL

Correct Answer:- Option-B

Question77:-Which of the following is correct about Electroencephalogram ?
i) Alpha waves normally occur in the frequency range 50-150 Hz.
ii) Beta waves normally occur in the frequency range of 14-30 Hz.
iii) Theta waves normally occur in the frequency range of 4-7 Hz
iv) Delta waves are below 3.5 Hz.

A:-Only (iv) is true

B:-(iii) and (iv) are true

C:-(ii), (iii) and (iv) are true

D:-All of the above are true

Correct Answer:- Option-C

Question78:-Which of the following is false about Pulse oximeter ?

A:-It determines arterial oxygen saturation

B:-It has two light emitting diodes

C:-It is unaffected by motion artefacts and skin tone

D:-It works on the principle of differential absorption of light Hb and HbO_2

Correct Answer:- Option-C

Question79:-As pure-tone audiometers generate test tone in octave steps, if 125 Hz is a frequency generated, which of the following frequencies are NOT generated ?

A:-150

B:-500

C:-1000

D:-8000

Correct Answer:- Option-A

Question80:-Which of the following is true about Ultrasonic Doppler blood flowmeters ?
(i) Frequency shift is directly proportional to the velocity of blood cells.
(ii) Frequency shift is directly proportional to blood flow volume.
(iii) Frequency shift is directly proportional to transmitted frequency.
(iv) Frequency shift is inversely proportional to velocity of sound in blood,

A:-(i), (ii) and (iii)

B:-(i), (iii) and (iv)

C:-(ii), (iii) and (iv)

D:-(i), (ii) and (iv)

Correct Answer:- Option-B

Question81:-A discrete impulse signal is defined as

A:-x[n]=n+1, for n=0; x[n]=0, for n≠0

B:-x[n]=1, for n=0; x[n]=0, for n≠0

C:-both (a) and (b)

D:-None of these

Correct Answer:- Option-C

Question82:-Which among the following is invalid about linear convolution between an input sample x[n] of length P and an impulse response h[n] of length Q ?

A:-The number samples of Input and output are the same

B:-The number samples of output are equal to (P + Q)

C:-The number samples of output are less than (P + Q)

D:-The number samples of output are more than(P + Q)

Correct Answer:- Option-C

Question83:-An FIR digital filter is used in the processing of an EEG signal containing frequencies from 0.5Hz to 30Hz. The filter is designed to remove the power line humming in Indian scenario. The most suitable sampling frequency with minimum memory requirements will be

A:-240Hz

B:-120Hz

C:-60Hz

D:-15Hz

Correct Answer:- Option-B

Question84:-An image contains all intensity levels as 0 (fully dark). The histogram equalized image will contain
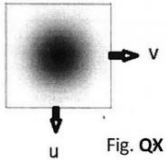
A:-Only 0 intensities

B:-All intensities from 0 to 255

C:-Only 0 and 255 intensities

D:-None of these

Correct Answer:- Option-A

Question85:-Figure QX represents a 2-D digital filter in the frequency domain for image processing. It is a black circle blurred towards its circumference, at the centre of a white back-ground. It can be

Fig. QX

A:-An ideal low pass filter

B:-An ideal high pass filter

C:-A Gaussian low pass filter

D:-A Gaussian high pass filter

Correct Answer:- Option-D

Question86:-Which of the following operations results in zooming of an image ?

A:-Under Sampling

B:-Over sampling

C:-Edge detection

D:-K-means clustering

Correct Answer:- Option-B

Question87:-Which of the following statement/s is/are true ?
(i) Differentiation can be done in frequency domain to sharpen an image.
(ii) Sharpening highlights fine details in an image

A:-Both (i) and (ii)

B:-(i) only

C:-(ii) only

D:-Both (i) and (ii) are wrong statements

Correct Answer:- Option-C

Question88:-In which of the following method a labelled set of training data is not necessary for training ?

A:-K-mean clustering

B:-SVM

C:-Decision trees

D:-None of these

Correct Answer:- Option-A

Question89:-Identify the correct statement/s with reference to deep learning
(i) They are computationally very efficient.
(ii) They need less training data compared to other methods.

A:-Both (i) and (ii)

B:-(i) only

C:-(ii) only

D:-Both (i) and (ii) are wrong statements

Correct Answer:- Option-D

Question90:-Select the correct statement/s about aliasing of images
(i) Aliasing may introduce additional frequencies which is not actually present in the original   image.
(ii) Aliasing can be reduced by smoothing the original image before sampling.

A:-Both (i) and (ii)

B:-(i) only

C:-(ii) only

D:-Both (i) and (ii) are wrong statements

Correct Answer:- Option-A

Question91:-The Paedobarography (F-SCAN) report of a 65 year old man with ten years history of Type 2 diabetes mellitus is as given below.
MPP>21N/CM2 in both forefeet with % of body weight loading
78% on Forefoot and 21% on hind foot on either side.
Based on the F-scan data which is the most ideal foot wear modification indicated for this patient in order to prevent the development of foot ulcer ?

A:-Thomas heel

B:-Metatarsal bar

C:-Metatarsal cookie

D:-Reverse Thomas heel

Correct Answer:- Option-B

Question92:-A 10 year old boy with spinal muscular atrophy was referred for rehabilitation. O/E his hip muscle power as per MRC grading is found as follows. Abd right 3/5, Left 2/5, Hip Ext right 3/5, Left 2/5, Flex 4/5 bilateral Knee Ext 4/5 bilateral. No hip instability. What is the gait deviation of this child and the most apt ambulatory aid for this child to improve his gait ? The right combination is

A:-Lordotic waddaling gait and single elbow crutch on right side

B:-Lordotic waddaling gait and single elbow crutch on left side

C:-Lordotic waddaling gait and bilateral elbow crutches

D:-Pseudo waddaling gait and bilateral elbow crutches

Correct Answer:- Option-C

Question93:-A 22 year old female who had undergone resection of retroperitoneal sarcoma developed recurrent buckling of left knee. Her motor power grading of left lower limb is as follows Hip flex 2/5, Ext 4/5, Abd4/5, Addu2/5, knee Ext2/5, Flex4/5, AnkleDF4/5, PF5/5. Ideal lower limb orthosis of choice is

A:-Ankle foot orthosis

B:-Floor reaction orthosis

C:-Tone reducing Ankle-foot orthosis

D:-Reciprocating gait orthosis

Correct Answer:- Option-B

Question94:-A 12 year old girl was brought with thoracolumabar scoliosis with apex at D3 and Cobb's angle 35 degrees. Which is the ideal spinal orthosis of choice ?

A:-Boston brace

B:-CASH brace

C:-Milwaukee brace

D:-Knight-Taylor brace

Correct Answer:- Option-C

Question95:-A 35 year old manual laborer and a habitual boozer came with complaints of sudden onset of weakness of right hand following an alcoholic slumber. His motor power examination results of right upper limb are as follows. Triceps 5/5, Brachioradialis 3/5, Wrist DF 2/5, MCP DF 2/5, which is the ideal orthosis of choice

A:-Robert-Jone's splint

B:-Nama sivaya orthosis

C:-Tenodesis orthosis

D:-Short Opponens orthosis

Correct Answer:- Option-A

Question96:-The following are true about Jaipur foot
(i) made of vulcanized rubber.
(ii) invented by Prof. P. K. Sethi.
(iii) does not have a keel.
(iv) unsuitable for muddy terrains.

A:-i, ii, iii, iv

B:-ii, iii, iv

C:-i, ii, iii

D:-iii, iv

Correct Answer:- Option-C

Question97:-A fifty year old athletic and agile excise circle inspector lost his right lower limb at above knee level following a hooch raid. He does not have any life style diseases and an avid sports person. He belongs to which Medicare Functional Classification Levels (MFCL) and the ideal prosthetic knee for this gentleman ? The right combination is

A:-K3&Microprocessor knee

B:-K3& Hydraulic knee

C:-K4& Microprocessor knee

D:-K3& Multi axial knee

Correct Answer:- Option-C

Question98:-Which of the following statements are true regarding prosthetic fitment of a pediatric upper limb amputee ?
(i) The process should be initiated at 3 to 9 months of age.
(ii) Onion peel socket is used.
(iii) The terminal device to be activated at ages 18 to 24 months.
(iv) the elbow to be activated at ages 48 to 60 months.

 A:-i, ii, iii, iv

 B:-i, ii, iii

 C:-i & ii

 D:-ii & iii

 Correct Answer:- Option-B

Question99:-Which of the following points are true regarding flex foot ?
(i) It is made of carbon fiber.
(ii) It was invented by Van Philips.
(iii) Foot of choice of para-athlets.
(iv) Better compliance since it resembles human foot.

 A:-i & iv

 B:-i & ii

 C:-i, ii, iii

 D:-ii, iii, iv

 Correct Answer:- Option-C

Question100:-The major working concept of "Thinking arm", the latest bionic hand is

 A:-Brain computer interface

 B:-Artificial intelligence

 C:-Mentamove

 D:-Neuroplasticity

 Correct Answer:- Option-A