## **FINAL ANSWER KEY**

Question Paper Code: 23/2017/OL Category Code: 017/2016 Exam: Junior Instructor Mechanic Medical Electronics Medium of Question: English Date of Test 22-03-2017 Department **Industrial Training** Alphacode Question1:-Gulmarg is a hill station in A:-Himachal Pradesh B:-Maharashtra C:-Jammu and Kashmir D:-Tamil Nadu Correct Answer:- Option-C Question2:-In India, which coast receives rainfall from North Eastern Monsoon? A:-Konkan coast B:-Coromandal coast C:-Malabar coast D:-Gujarat coast Correct Answer:- Option-B Question3:-Who is the Deputy Chairman of NITI Aayog? A:-Aravind Panagaria B:-C. Ranga Rajan C:-Urjith Patel D:-None of the above Correct Answer: - Option-A Question4:-Pradhan Mantri Suraksha Bima Yojana started on A:-28th August, 2014 B:-22nd January, 2015 C:-22nd September, 2014 D:-15th July, 2015 Correct Answer:- Option-D Question5:-How many censuses (including the 2011 census) have been carried out since Independence? A:-07 B:-05 C:-06 D:-08 Correct Answer:- Option-A Question6:-Al-Hilal was a newspaper started for propagating nationalism by A:-Mohammed Ali B:-Abul Kalam Azad C:-Sayed Ahammed Khan D:-Mahatma Gandhi Correct Answer:- Option-B Question7:-Who was the British Prime Minister at the time of the Second Round Table Conference? A:-Clement Atlee B:-Neville Chamberlain C:-Ramsay MacDonald D:-None of the above Correct Answer:- Option-C Question8:-Kaladi the birth place of Sankaracharya stands, on the banks of the river A:-Pamba B:-Bharatapuzha

C:-Chaliyar D:-Periyar

Correct Answer:- Option-D

Question9:-Kerala Pazhama, a pioneering Malayalam works on Kerala history written by

A:-J. Hough B:-K.V. Krishna Ayyar C:-Dr. Herman Gundert D:-Fr. Ferroli Correct Answer:- Option-C Question10:-Who developed Cochin Harbour into a major port? A:-Cabral **B:-Lord Macaulay** C:-Robert Bristow D:-Marthanda Varma Correct Answer:- Option-C Question11:-Which social reformer was nominated by Travancore Government as a member of Sri Mulam Praja Sabha? A:-Sahodaran Ayyappan B:-Dr. Palpu C:-Sri Narayana Guru D:-Ayyankali Correct Answer:- Option-D Question12:-The teachings of one of the following social reformer, helped to strengthen the base of national movement in North Malabar A:-Swami Vagbhatananda B:-Vaikunda Swamikal C:-Chattampi Swamikal D:-Sri Narayana Guru Correct Answer: - Option-A Question13:-Poikayil Yohannan is associated with the organisation of A:-Sadhujana Paripalana Yogam B:-Prathyaksha Raksha Daiva Sabha C:-Atmavidhya Sangam D:-Arya Samajam Correct Answer:- Option-B Question14:-Jati Mimamsa (Critique of Caste) is written by A:-Chattampi Swamikal B:-Pandit Karuppan C:-Sri Narayana Guru D:-Vaikunda Swamikal Correct Answer:- Option-C Question15:-Which social reformer is known as 'Vidyadhiraja'? A:-K. Kelappan B:-Pandit Karuppan C:-Ayyankali D:-Chattampi Swamikal Correct Answer:- Option-D Question16:-In which year, Fedel Castro officially steps down as President of Cuba? A:-2008 B:-2006 C:-2015 D:-1976 Correct Answer: - Option-A Question17:-Who is the director of the popular film 'Pulimurugan'? A:-Tomichan Mulakumpadam B:-Vysakh C:-Nadir Shah D:-Mohanlal Correct Answer:- Option-B Question18:-Who hit the fastest Ranji Trophy Century at Thiruvananthapuram? A:-Vijay Hasare B:-Gughale C:-Rishab Pant

D:-Ankit Bhavan

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Correct Answer:- Option-C
Question19:-Who is the minister in charge of Portfolio of Kerala State Dairy Development Department?
     A:-V.S. Sunil Kumar
     B:-P. Thilothaman
     C:-T.P. Rama Krishnan
     D:-K. Raju
     Correct Answer:- Option-D
Question 20:-Britain's Andy Murray won the ATP World Tour Number One Trophy after defeating
     A:-Novak Djokovic
     B:-Stan Wawrinka
     C:-David Goffin
     D:-Kei Nishi Kori
     Correct Answer: - Option-A
Question21:-The mode of propagation of FM Signal is by
     A:-Sky wave
     B:-Ground wave
     C:-Direct wave
     D:-Reflected wave
     Correct Answer:- Option-C
Question22:-Adding a weak cell in series with a battery causes
     A:-Decrease in Current
     B:-Increase in Current
     C:-Decrease in Voltage
     D:-No Change in Voltage and Current
     Correct Answer:- Option-C
Question23:-The ratio of ON time of a Pulse to the OFF time is known as
    A:-Pulse Repetition Frequency
     B:-Duty Cycle
     C:-Time Cycle
     D:-ON Cycle
     Correct Answer:-Question Cancelled
Question24:-The Time Period of an Astable Multivibrator is given by the expression
    A:-T = RC
     B:-T = 0.707 RC
    C:-T = 0.69 RC
     D:-T = 1.38 RC
     Correct Answer:-Question Cancelled
Question25:-Wien Bridge Oscillator Circuit uses
     A:-Negative Feed Back
     B:-Positive Feed Back
     C:-Both Negative and Positive Feed Back
     D:-None of the above
     Correct Answer:- Option-C
Question26:-The Amplitude of undammed Oscillation
    A:-Decreases with time
     B:-Increases with time
     C:-Constant
     D:-Zero
     Correct Answer:- Option-C
Question27:-The impedance of the parallel RLC circuit at Resonance is
    A:-Maximum
     B:-Minimum
     C:-Zero
     D:-Equal to DC resistance of the coil
     Correct Answer:- Option-A
Question28:-A series resonance circuit used to reject an undesired frequency is known as
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A:-Wave guide B:-Wave trap C:-Band pass filter

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D:-Band stop filter
     Correct Answer:- Option-B
Question29:-Which filters are used to block the 50 Hz hum produced by AC mains in Amplifiers?
     A:-Low Pass
     B:-High Pass
     C:-Band Pass
     D:-Band Stop
     Correct Answer:- Option-D
Question30:-Voltage follower circuits are used for
     A:-Current amplification
     B:-Voltage amplification
     C:-To avoid loading effect of source
     D:-All the above
     Correct Answer:- Option-C
Question31:-Which of the following is difficult to fabricate in an IC?
     A:-Diode
     B:-Resistor
     C:-Transistor
     D:-Choke
     Correct Answer:- Option-D
Question32:-The output impedance of an Op-Amp is about
     Α:-1 ΜΩ
     B:-10 KΩ
     C:-500 Ω
     D:-50 Ω
     Correct Answer:- Option-D
Question33:-In Class B amplifier the Q point is Set Slightly above cut off. The purpose is to
     A:-Avoid Cross over distortion
     B:-Increase efficiency
     C:-Reduce power dissipation
     D:-Increase gain
     Correct Answer: - Option-A
Question34:-Velocity of sound in water/liquid compared to that of air is
     A:-Less
     B:-Either Less or More
     C:-The Same
     D:-More
     Correct Answer:- Option-D
Question35:-Specific Gravity of a fully charged Lead-Acid cell at room temperature will be
     A:-1.15
     B:-1.38
     C:-1.835
     D:-1.28
     Correct Answer:- Option-D
Question36:-For IC 7815 the minimum unregulated DC input voltage should be
     A:-+15 V
     B:-+17 V
     C:-+19 V
     D:-+13 V
     Correct Answer:- Option-B
Question 37:-Two identical transistors having a \beta of 50 each, are connected as Darlington pair, the current gain \beta of the
amplifier is
     A:-100
     B:-1
     C:-2500
     D:-500
     Correct Answer:- Option-C
Question38:-Effect of the emitter by pass capacitor in a CE Amplifier is
     A:-Gain
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B:-Input impedance
     C:-Output impedance
     D:-Both (1) and (2)
     Correct Answer:- Option-D
Question39:-Which of the following is the most preferred type of biasing?
    A:-Emitter bias
     B:-Voltage divider bias
     C:-Base bias
     D:-Both (1) and (3)
     Correct Answer:- Option-B
Question40:-A good power supply should have load regulation not more than
     A:-0.10%
     B:-1%
     C:-5%
     D:-10%
     Correct Answer:- Option-A
Question41:-The phenomenon which causes reverse breakdown in Zener Diode is known as
    A:-Hall effect
     B:-Break down effect
     C:-Avalanche effect
     D:-Induction effect
    Correct Answer:- Option-C
Question42:-The RMS voltage at the transformer secondary is 6 V. Its Peak Value is
    A:-9.6 V
     B:-7.2 V
    C:-8.5 V
     D:-12 V
     Correct Answer:- Option-C
Question43:-When a diode is tested using an Ohm meter, it indicates high resistance in both direction, the condition of the
diode is
    A:-Open
     B:-Short
     C:-Leaky
     D:-Good
     Correct Answer: - Option-A
Question44:-Which of the following is a polarised capacitor?
     A:-Paper Capacitor
     B:-Plastic Film Capacitor
     C:-Ceramic Capacitor
     D:-Tandalum Electrolytic Capacitor
     Correct Answer:- Option-D
Question45:-If `m` and `n` are the modulus of any counters, then overall modulus of the cascaded counters is given by
    A:-`mn`
    B:-`2^(mn)`
     C:-`mn^2`
    D:-`(m/n)^2`
     Correct Answer: - Option-A
Question46:-IC 7476 is
    A:-D FlipFlop
     B:-RS FlipFlop
     C:-JK FlipFlop
     D:-MS FlipFlop
     Correct Answer:- Option-C
Question47:-The output of a particular OP-Amp increases 8 V in 12 ms, the slew rate is
    A:-90 V/ms
    B:-1 V/ms
     C:-1.5 V/ms
     D:-0.67 V/ms
     Correct Answer:- Option-D
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Question48:-A Binary number 10101 is equivalent to decimal number
    A:-19
     B:-12
     C:-27
     D:-21
     Correct Answer:- Option-D
Question49:-The number `(12) 8` is equivalent to decimal
     A:-12
     B:-20
     C:-10
     D:-4
     Correct Answer:- Option-C
Question50:-The expression `bar{(ABC)}` can be simplified as
    A:-`barA.barB.barC`
     B:-`AB + BC + CA`
    C:-`AB+barC`
     D:-`barA+barB+barC`
    Correct Answer:- Option-D
Question51:-CMOS circuits are extensively used for One chip computers mainly because of their
     A:-Low power dissipation
     B:-Low cost
     C:-High noise immunity
     D:-Large packing density
     Correct Answer:- Option-D
Question52:-The principal disadvantage of a Piezo electric transducer is that it
     A:-can measure only force
     B:-cannot measure static conditions
    C:-is too small to handle
     D:-produces only DC voltage
     Correct Answer:- Option-B
Question53:-Loading effect is principally caused by ______ instruments.
     A:-high resistance
     B:-low sensitivity
     C:-high sensitivity
     D:-high range
     Correct Answer:- Option-B
Question54:-Total internal reflection can take place when light travels from
    A:-air to glass
     B:-glass to air
     C:-rarer to a denser medium
     D:-denser to a rarer medium
     Correct Answer:- Option-D
Question55:-The structure of an optical fibre consist of
     A:-multimode step index
     B:-graded index
     C:-single mode step index
     D:-all of the above
     Correct Answer:- Option-D
Question56:-Noise margin is expressed in
    A:-Decibel
    B:-Watt
    C:-Volt
     D:-Phon
     Correct Answer:- Option-C
Question57:-An X-OR gate produces an output only when its two inputs are
    A:-high
     B:-low
     C:-different
     D:-same
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Correct Answer:- Option-C
Question58:-In a JFET, `"I {DSS}"` is known as
     A:-Drain to source current
     B:-Drain to source current with gate shorted
     C:-Drain to source current with gate open
     D:-None of the above
     Correct Answer:- Option-B
Question59:-Which of the following devices has the highest input impedance?
     A:-JFET
     B:-Ordinary transistor
     C:-Crystal diode
     D:-MOSFET
     Correct Answer:- Option-D
Question60:-An SCR is turned off when
     A:-Anode current is reduced to zero
     B:-Gate voltage is reduced to zero
     C:-Gate is reverse biased
     D:-None of the above
     Correct Answer:- Option-A
Question61:-A diac is _____ switch.
     A:-AC
     B:-DC
     C:-Mechanical
     D:-None of the above
     Correct Answer: - Option-A
Question62:-A UJT may be used as
    A:-Amplifier
     B:-Saw tooth generator
     C:-Rectifier
    D:-None of the above
     Correct Answer:- Option-B
Question63:-The horizontal plates of a CRO are supplied with ______ to observe the waveform of a signal.
     A:-Sinusoidal wave
     B:-Cosine wave
     C:-Sawtooth wave
     D:-None of the above
     Correct Answer:- Option-C
Question64:-The modulus of a counter is
    A:-The number of flipflops
     B:-The actual number of states in its sequence
     C:-The number of times it recycles in a sec
     D:-The maximum no of states
     Correct Answer:- Option-B
Question65:-The digital circuit that routes its single input signal to one of `2^n` output lines depending on the value of `n`
control lines is
     A:-multiplexer
     B:-demultiplexer
     C:-encoder
     D:-data selector
     Correct Answer:- Option-B
Question66:-A full adder can be made up of
    A:-two half adders
     B:-two half adders and a NOT gate
     C:-two half adders and a OR gate
     D:-two half adders and a AND gate
     Correct Answer:- Option-C
Question67:-Which of the following is called the Universal Bias?
     A:-Emitter bias
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B:-Voltage divider bias

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D:-None of the above
     Correct Answer:- Option-B
Question68:-The advantage of transistor over Vacuum tube is
     A:-Very small size
     B:-Minimum power loss in the form of heal
     C:-Low operating voltage
     D:-All of the above
     Correct Answer:- Option-D
Question69:-Which of the following should be as high as possible?
    A:-signal to noise ratio
     B:-hysteresis
     C:-range
     D:-frequency response
     Correct Answer: - Option-A
Question70:-The degree to which variation in the output of an instrument follow input variations is referred to as
    A:-sensitivity
     B:-linearity
     C:-hysteresis
     D:-accuracy
     Correct Answer:- Option-B
Question71:-The 8051 microcontroller is of _____ pin package as a _____ processor.
     A:-30, 1 byte
     B:-20, 1 byte
     C:-40, 8 bit
     D:-40, 8 byte
     Correct Answer:- Option-C
Question72:-In induction heating depth of penetration is proportional to
    A:-`"sqrt {frequency}"`
     B:-`1/ "sqrt {frequency}"`
     C:-frequency
    D:-`"(frequency)^2"`
    Correct Answer:- Option-B
Question73:-The ON state voltage drop across IGBT is
     A:-Less than that across MOSFET
     B:-Greater than that across MOSFET
     C:-Equal to that of MOSFET
     D:-None of the above
     Correct Answer:- Option-A
Question74:-Which BUS is bi-directional?
     A:-Data bus
     B:-Control bus
     C:-Address bus
     D:-Multiplexed bus
     Correct Answer: - Option-A
Question75:-The composition of soft solder is
    A:-Lead 37% - Tin 63%
     B:-Lead 50% - Tin 50%
     C:-Lead 63% - Tin 37%
     D:-Lead 70% - Tin 30%
     Correct Answer:- Option-A
Question76:-Which digital IC package type makes the most efficient use of printed circuit board space?
    A:-SMT
     B:-TO can
     C:-Flat-pack
     D:-DIP
     Correct Answer:- Option-A
Question77:-Which of the following can be act as Shear Protectorand
    A:-Serum
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C:-Base bias

B:-Silicon oil
C:-Glucose
D:-Glutamic acid
Correct Answer:- Option-A
Question78:-Non linear relationship between shear stress and shear rate exist in
A:-Newtonian fluids
B:-Non Newtonian fluids
C:-Both (1) and (2)
D:-None of these
Correct Answer:- Option-B
Question79:-The mechanical means of accomplishing sterilization of fermentation media/equipment is
A:-ultrasonic
B:-radiation
C:-chemical agents
D:-none of these
Correct Answer:- Option-A
Question80:-The collection efficiency by diffusion increases with
A:-Decreasing particle size
B:-Decreasing air velocity
C:-Both (1) and (2)
D:-Increasing particle size
Correct Answer:- Option-C
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Question81:-MRI machines are calibrated in units.  A:-Power
B:-Tesla
C:-Pressure
D:-Hertz
Correct Answer:- Option-B  Question82:-Phonocardiograph is used for recording the sounds connected to which of the following
A:-pumping action of heart
B:-movement of valves
C:-pulsation in blood vessels
D:-none of these
Correct Answer:- Option-A
Question83:-The circuit which controls the Turn ON and Turn OFF and length of X-Ray delivered it to the patient is
A:-Filament circuit
B:-HT-circuit
C:-Timing circuit
D:-None of these
Correct Answer:- Option-C
Question84:-In dialysis the waste products are transferred to the dialysate by  A:-Viscosity variation
B:-Diffusion
C:-Surface tension
D:-Centrifuge
Correct Answer:- Option-B
Question85:-Among the following imaging system which has noninvasive character
A:-CT imaging system
B:-PET system
C:-Nuclear imaging system
D:-Ultrasonic imaging system
Correct Answer:- Option-D
Question86:-The most modern difibrilators will have position for synchronizing discharge pulse with the patient's
A:-EEG R: ECG
B:-ECG
C:-EMG
D:-None of these
Correct Answer:- Option-B
Question87:-Cardiac catheterisation is a technique used primarily to diagnose

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A:-Nerve deficiencies
     B:-Valve deficiencies
     C:-Lung deficiencies
     D:-None of these
    Correct Answer:- Option-B
Question88:-X-Ray images are
     A:-Unidimensional
     B:-Multidimensional
     C:-Two dimensional
     D:-Three dimensional
     Correct Answer:- Option-C
Question89:-In Audiometer which channel has pure tone or speech output
    A:-First
     B:-Second
     C:-Third
     D:-Fourth
     Correct Answer:- Option-A
Question90:-In Bio-Telemetry the FDM stands for
     A:-Frequency division modulation
     B:-Fesimile distance modulation
     C:-Fourier domain modulation
     D:-Frequency division multiplexing
     Correct Answer:- Option-D
Question91:-An Endoscope is an instrument for examining
     A:-The Cancer Cells
     B:-Blood Flow Rates
     C:-The Head Surfaces
     D:-A Body Cavity
     Correct Answer:- Option-D
Question92:-The ability of the trace to remain visible on the face of CRT is known as
     A:-Appearance
    B:-Persistence
     C:-Resolution
     D:-Precision
     Correct Answer:- Option-B
Question93:-The implanted receiver has been used with patient for stimulating
     A:-nerves
     B:-bones
     C:-muscles
    D:-tracts
     Correct Answer: - Option-A
                   is used to discharge the defibrillator when the paddles are properly positioned.
Question94:-A ____
    A:-Thumb switch
     B:-Foot switch
     C:-Paddle switch
     D:-Charge switch
     Correct Answer:-Question Cancelled
Ouestion95:-IN ERG measurements the reference electrode is made from
    A:-Carbon
     B:-Silver
     C:-Carbon chloride
     D:-Silver chloride
     Correct Answer:- Option-D
Question96:-The advantage of star connected supply system is that
     A:-Line current is equal to phase current
    B:-Two voltages can be used
     C:-Phase sequence can be easily changed
     D:-It is a simple arrangement
     Correct Answer:- Option-B
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Question97:-Internet works on
A:-Packet switching
B:-Circuit switching
C:-Both (1) and (2)
D:-None
Correct Answer:- Option-C
Question98:-A circuit breaker is a
A:-power factor correcting device
B:-wave form correcting device
C:-both (1) and (2)
D:-current interrupting device
Correct Answer:- Option-D
Question99:-For communication from one network to another device is used
A:-gate way
B:-utility server
C:-printer server
D:-file server
Correct Answer:- Option-A
Question100:-Coaxial cable consists of concentric copper conductors.
A:-1
B:-2
C:-3
D:-4
Correct Answer:- Option-B