Program: SE ELECTICAL ------------------------------- Engineering

Curriculum Scheme: Revised 2016

Examination: SECOND Year Semester III

Course Code: \_EEC304\_\_\_\_ and Course Name: \_\_\_ELECTRICAL & ELECTRONIC MEASURMENTS\_

Time: 1 hour Max. Marks: 50

==============================================================================

Note to the students:- All the Questions are compulsory and carry equal marks .

|  |  |
| --- | --- |
| Q1. | Basically a potentiometer is a device for |
| Option A: | Comparing two currents |
| Option B: | Measuring a current |
| Option C: | Comparing two voltages |
| Option D: | Measuring a voltage |
|  |  |
| Q2. | According to application, instruments are classified as |
| Option A: | switch board |
| Option B: | portable |
| Option C: | both (a) and (b) |
| Option D: | moving coil |
|  |  |
| Q3. | A \_\_\_\_\_ device prevents the oscillation of the moving system and enables the latter to reach its final position quickly |
| Option A: | deflecting |
| Option B: | controlling |
| Option C: | damping |
| Option D: | Both a &b |
|  |  |
| Q4. | Which of the following errors can arise, as a result of mistakes in reading, parallax, improper instrument location and inadequate lighting? |
| Option A: | Construction error |
| Option B: | Transmission error |
| Option C: | Observation error |
| Option D: | Translation error |
|  |  |
| Q5. | Errors which may be variable both in magnitude and nature (positive or negative) are classified as |
| Option A: | Hysteresis errors |
| Option B: | Random errors |
| Option C: | Systematic errors |
| Option D: | Interaction errors |
|  |  |
| Q6. | A PMMC meter has an internal resistance of 500 Ω and the current required for its full scale deflection is 100 µA. the power consumed by the meter is |
| Option A: | 5 µW |
| Option B: | 5 mW |
| Option C: | 5 W |
| Option D: | 0.5 µW |
|  |  |
| Q7. | The advantage of Hay’s bridge over Maxwell’s inductance-capacitance bridge is because |
| Option A: | Its equation for balance do not contain any frequency term. |
| Option B: | It can be used for measurement of inductance of high Q coils. |
| Option C: | It can be used for measurement of inductance of low Q coils. |
| Option D: | Its equation for balance do not contain any voltage term. |
|  |  |
| Q8. | Loading effect is principally caused by ……….. Instruments. |
| Option A: | High resistance |
| Option B: | Low sensitivity |
| Option C: | High sensitivity |
| Option D: | High range |
|  |  |
| Q9. | Digital instruments are those which |
| Option A: | Have numerical readout |
| Option B: | Use LED or LCD displays |
| Option C: | Have a circuitry of digital design |
| Option D: | Use deflection type meter movemen |
|  |  |
| Q10. | he main difference between electronic and electrical instruments is that an electronic instrument contains: |
| Option A: | An electronic device |
| Option B: | A transducer |
| Option C: | A digital readout |
| Option D: | Electrons |
|  |  |
| Q11. | A VTVM produces negligible loading effect on a circuit under test primarily because |
| Option A: | It virtually draws no current from the circuit. |
| Option B: | Of its very high internal resistance. |
| Option C: | It uses high vacuum tubes. |
| Option D: | It is a null deflection instrument |
|  |  |
| Q12. | The essential elements of electronic instruments are: |
| Option A: | Transducer. |
| Option B: | Signal conditioner. |
| Option C: | Indicating devices. |
| Option D: | All of the above |
|  |  |
| Q13. | he basic movement can be converted into an ohmmeter by connecting a ……………. With it. |
| Option A: | High resistance in series |
| Option B: | Low resistance in parallel |
| Option C: | Battery in series |
| Option D: | Battery and a variable resistance in series |
|  |  |
| Q14. | A 0-1 mA meter has a sensitivity of: |
| Option A: | 1 kΩ/V |
| Option B: | 1 mA |
| Option C: | 1 k Ω |
| Option D: | 1000 A |
|  |  |
| Q15. | To avoid errors in any experimental work, ……………… is necessary. |
| Option A: | Planning |
| Option B: | Execution |
| Option C: | Evaluation |
| Option D: | All of the above |
|  |  |
| Q16. | A device or mechanism used to determine the present value of the quantity under measurement known as: |
| Option A: | Multi-meter |
| Option B: | Instrument |
| Option C: | Sensitivity |
| Option D: | Both a & b |
|  |  |
| Q17. | …………. Is the measure of the consistency or repeatability of measurements. |
| Option A: | Accuracy |
| Option B: | Resolution |
| Option C: | Measurement |
| Option D: | Precision |
|  |  |
| Q18. | The deviation of the true value from the desired value is known as: |
| Option A: | Expected value |
| Option B: | Output value |
| Option C: | Error |
| Option D: | Input value |
|  |  |
| Q19. | A constant uniform deviation of the operation of an instrument is known as: |
| Option A: | Gross error |
| Option B: | Systematic error |
| Option C: | Random error |
| Option D: | All of the above |
|  |  |
| Q20. | The most probable value of a measured variable is the …………………………… of the number of readings taken. |
| Option A: | Arithmetic mean |
| Option B: | Deviation from the mean |
| Option C: | Average deviation |
| Option D: | Standard deviation |
|  |  |
| Q21. | Function of transducer is to convert |
| Option A: | Electrical signal into mechanical quantity |
| Option B: | Electrical signal into non electrical quantity |
| Option C: | Non electrical quantity into electrical signal |
| Option D: | Electrical signal into NON mechanical quantiTY |
|  |  |
| Q22. | Potentiometer transducers are used for the measurement of |
| Option A: | Both (a) and (b) |
| Option B: | Pressure |
| Option C: | Displacement |
| Option D: | Humidity |
|  |  |
| Q23. | Thermistor is a transducer. Its temperature coefficient is |
| Option A: | One |
| Option B: | Negative |
| Option C: | Positive |
| Option D: | Zero |
|  |  |
| Q24. | Strain gauge is a |
| Option A: | Passive device and converts mechanical displacement into a change of resistance |
| Option B: | Active device and converts mechanical displacement into a change of resistance |
| Option C: | Active device and converts electrical displacement into a change of resistance |
| Option D: | Passive device and converts electrical displacement into a change of resistance |
|  |  |
| Q25. | The linear variable differential transformer transducer is |
| Option A: | Resistive transducer |
| Option B: | Inductive transducer |
| Option C: | Non-inductive transducer |
| Option D: | Capacitive transducer |