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المجموعة:

1. Read the following sentences and decide whether they are **True** or **false**. (15 Marks)

- All branches of engineering require using the same equipment. ()
- Forge, anneal, and galvanize are processes in treating metals. ()
- Harden is an adjective refers to a metal treatment. ()
- Building a car takes a long time from research, through design to final development. ()
- Managers of a car factory coordinate purchasing materials too. ()
- ate is an ending refers to an organic compound contains a double bond between carbon atoms. ()
- In construction, the structure may not be part of the primary frame of the building. ()
- Specialties within the electrical field include the design of transmission lines. ()
- Dustproof is a compound word. ()
- Electronic circuits consist of interconnections of electronic components at the heart of which are superconductors. ()
- Diodes function as electronic valve allowing current to flow in different directions. ()
- Electricity distribution networks shrank in importance and activity during the 20th century in the UK. ()
- The term civil engineering describes engineering work performed by civilians for the military purposes. ()
- The safety engineer inspects all possible danger spots in a mine. ()
- In petroleum industry, upstream includes oil and natural gas exploration. ()

2. What is being described? (15 marks)

- to cover with a thin layer of metal using electrolysis, e.g. car components _____
- to protect from rusting by coating in zinc, e.g. food cans _____
- produces electricity _____
- sends an electric current to the spark plugs _____
- This industry makes soaps and beauty aids _____
- These give food a good taste _____
- material that doesn't allow rain to get into it _____
- a board consisting of a number of electrical switches _____
- An oily thick flammable liquid which is a form of various of hydrocarbons _____
- IC stands for _____
- The naturally occurring material from which a mineral or minerals of economic value can be extracted.

12. Places in oceans, seas, or large lakes. _____
13. The science, techniques, and business of mineral discovery and production. _____
14. Dimensions and measurements. _____
15. This structure is built across the river to hold back water. _____

3. A civil engineer is showing an international visitor around. Complete using the following words. (11 marks)

Camber, crown, culvert, curb, macadam, main, manhole, metal, pavement, pedestrian crossing, Pothole, sewer, soft shoulder, tarmac, underdrain.

Here we are on one of our town streets. As you can see the road is not flat. It has a

- (a) _____. This is to allow rain water to run off the surface and into the drains at the side. The highest part of the road is the (b) _____ in the centre. A (c) _____ carrying waste water runs below the surface of the road. At certain points along the road you'll find large (d) _____ which allow engineers to go down and inspect electricity and telephone cables which also run below the road. On either side of the road there is a raised (e) _____ for pedestrians which is

edged with (f) _____ stones. The black surface we use nowadays is a variety of (g) _____. It was invented by a man of that name whose company was later called Tarmac. As you can see this road needs to be resurfaced. There are a number of (h) _____ following the heavy rain we had last month.

Now, here we are on a (i) _____ road out of town. There are no pavements here. Grass is allowed to grow along the edges and provides a (j) _____. Over there you can see a (k) _____ carrying a small stream under the road.

4. Circle/underline the correct word in bold in the following sentences. (11 marks)

- A flat roof is usually covered in roofing **felt/skin** for protection against the weather.
- Rooms in a building are divided by interior **supports/partitions**.
- To prevent water entering the cavity of the wall, moisture barriers are used on the external surface and **vapour/insulating** barriers are used on the internal face.
- The **assembly/structure** of a building transfers all the loads acting on the building to the ground.
- The **ventilating/acoustical** system provides fresh air.
- Sound-deadening/ -barrier material** is used to reduce sound passing from one room to another.
- Transistors/inductors** are the key component in electronics.
- All **electronic/electrical** systems consist of input, a processor and output, and usually memory.
- The memory may not be present in simple systems, but its function is the **storage/transmission** of information for the processor.

10. Continual developments in electronics give us increased **reliability /recovery** in electronic devices.

11. Electronic equipment controls **microprocessors/microwaves** in. for example. weapons systems, cellular radiotelephone systems and domestic appliances.

5. Answer the following 2 questions, (8 Marks)

a) What are the **four** branches of electrical engineering?

- _____
- _____
- _____
- _____

b) What are the **four** stages to mining?

- _____
- _____
- _____
- _____

Best of Luck