


Kafrelsheikh University		Semester: 2 nd Semester
Mechanical Engineering		Final Examination
Dept. Mechanical Engineering		Date: June 3 rd , 2018
Year: Preparatory		Time allowed: 2 hour
Inst. : Assoc. Prof. M. Abou Al-Sood Assist. Prof. A. Saeed		Full Mark: 45
Subject: Technical English Language (HUM0201)		
Questions and Answers Booklet		

Part (1)- Marks (22.5/45)

- (a) This exam measures ILOs no.: a10, b4, b3, b11, c1, and d3
- (b) No. of pages: 4 - No. of questions: 9.
- (c) This is a close book exam.
- (d) Clear and neat writing and answers are required. In general, marks will not be assigned for writing and answers that require unreasonable (in the opinion of the instructor) effort to decipher.
- (e) Ask for clarification if any question statement is not clear to you.
- (f) The weight of each problem is indicated.
- (g) The exam will be marked out of 25. Exam contains 97 points. Each point weights (0.36) mark. So, there is a bonus of 9.7 marks.

1. Match the GPS applications (1-6) to the descriptions (a-f) (5 Points)

- | | | |
|----------------------------|--|---|
| 1. avionic equipment | a. navigation and safety at sea | <div style="border: 1px solid black; padding: 10px; width: 80px; margin: 0 auto;"> <hr style="border: 0; border-top: 1px solid black;"/> 6 </div> |
| 2. civil engineering | b. setting out position and levels of new structures | |
| 3. geological exploration | c. mapping surfaces features | |
| 4. topographical surveying | d. applications in mining and the oil industry | |
| 5. GPS in cars and trucks | e. highway navigation and vehicle tracking | |
| 6. maritime applications | f. air traffic control, navigation and autopilot systems | |

2. Match the verbs (1-9) to definitions (a-i) (9 Points)

- | | | |
|----------------|--|---|
| 1. support | a. carried (objects, over a distance) | <div style="border: 1px solid black; padding: 10px; width: 80px; margin: 0 auto;"> <hr style="border: 0; border-top: 1px solid black;"/> 9 </div> |
| 2. raise | b. hold something firmly / bear the weight | |
| 3. transported | c. climb down | |
| 4. connecting | d. provided with energy / moved by a force | |
| 5. Attached | e. joining | |
| 6. ascend | f. driven / have movement directed | |
| 7. controlled | g. fixed | |
| 8. powered | h. climb up | |
| 9. descend | i. lift / make something go up | |

3. A.

Complete the following extracts from the description using the correct form of the words in the box

flush with groove hole pin recess ridge set back

1.there is a circular slot at the top. It's obviously a blind _____. It doesn't4 go right through.

2.there are two plastic _____. One on either side of the plug casing, and they slot into corresponding _____ at each side of the socket. In addition, the centre of the socket is _____. So rather than being _____ the front of the socket, on the same face, the circular area that receives the plug is _____ from the surrounding casing
3. These covers only open when pressure is applied to both _____ by the two _____ of the plug simultaneously.

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B. Complete the following definitions using the words in the box

abrasive wheel guillotine hole-saw kerf punch toothed blade

1. A _____ makes straight cuts by applying pressure to shear the material
2. A _____ makes holes by applying pressure to shear the material
3. A _____ has sharp edges for cutting or milling
4. A _____ is the width of the saw cut
5. A _____ cuts a circular piece to remove an intact core of material
6. A _____ has a hard, rough surface for cutting or grinding

6

C. What does the abbreviation UHP waterjet stand for?

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D. Complete the following descriptions of how the garden chair airship was assembled by underlining the correct words

1. A quantity of helium gas was **contained** / **suspended** inside each balloon.
2. A tube was **inserted** / **projected** inside the opening of the balloons to inflate them.
3. The balloons were **situated** / **projected** over the chair, in a large cluster.
4. The chair was **contained** / **suspended** under the balloons by ropes.
5. Arm rests, **contained** / **located** beside the pilot, at each side, helped to hold him in place.
6. The landing gear, **inserting** / **projecting** below the seat, considered, simply, of the chair legs.
7. The pilot was **positioned** / **projected** underneath the balloons, so his weight was low down.

7

4. State what are the five engineering enemies:

- 1.
- 2.
- 3.
- 4.
- 5.

5

Which engineering enemies can be the problematic for each of the following car parts?

1. Chassis ()
2. Suspension ()
3. Wings ()
4. Engine ()
5. Brakes ()
6. Cooling system ()

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- 7. Gearbox and clutch ()
- 8. Tyres ()
- 9. Nuts and bolts ()

5. Complete more extracts from the talk using the correct form of a verb in box 1 and a word in box 2

1.
Below clog cut leak run wear work

2.
loose up out

1. ... the radiator problem didn't cause the engine to _____
2. ... a nut _____ on a radiator pipe, which resulted in coolant liquid _____
3. ... the engine _____ on one of the corners.
4. ... he switched off before the system had _____ of coolant.
5. ... the openings in the side pods always _____ with dirt.
6. The tyres weren't close to _____

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6. Match the verbs (1-10) to the definitions (a-j) (10 Points)

- | | |
|---------------|---|
| 1. adjust | a. carry out planned maintenance |
| 2. drain | b. change an old or damaged part |
| 3. disconnect | c. check carefully |
| 4. dismantle | d. empty a liquid |
| 5. examine | e. add more fluid to fill a tank to the recommended level |
| 6. replace | f. Set up carefully by making small changes |
| 7. reconnect | g. take apart assembled components |
| 8. service | h. apply the correct torque, for example to loose bolts |
| 9. tighten | i. establish a connection again |
| 10. Top up | j. remove or isolate from a circuit or network |

10

7. Match the words (1-8) to the definition (a-h)

- | | |
|--------------------------|-----------------------------------|
| 1. Confined space | a. burns the skin |
| 2. CO2 detector | b. Contact (with a danger) |
| 3. exposure | c. sources of ignition |
| 4. irritate | d. small area without ventilation |
| 5. toxic | e. measure carbon dioxide |
| 6. corrosive | f. poisonous |
| 7. flammable | g. causes skin to react |
| 8. naked flames / sparks | h. catches fire easily |

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8. A. Which of the following phrases give **more** emphasis than it's important, and which give **less**?

- | | |
|-----------------------|------------------------|
| 1. it's crucial () | 3. It's preferable () |
| 2. it's essential () | 4. It's vital () |

B. According to what you studied in Unit #7, what does PPE stand for?

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9. Complete the table below with the types of personal protective equipment:

dust mask	ear plugs	ear defenders	gauntlets	goggles
overalls	respirator	Safety boots/shoes	safety harness	welding mask

Items or Personal Protective Equipment	Description
1.	Inserted in the ears to protect the hearing
2.	Protect the hearing by covering the ears - can also be attached to the sides of hardhat
3.	Have steel toe caps and reinforced soles
4.	Has dark glass to protect the eyes from bright flashes of light
5.	filters solid particles from the air
6.	Gas mask - filters gas particles from the air
7.	Prevents the wearer from falling
8.	another general term for safety glasses
9.	For covering the body, arms and legs
10.	Long gloves with extended up the arms

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Kafrelshiekh University
 Faculty of Engineering
 Final Second Term Exam
 Preparatory Year
 Name:



Date: June 5, 2018
 Technical Language
 Time allowed: two hours
 Full Mark: 45 marks
 Academic Number:

Answer All the Questions:

Question No. one (5marks):

Match the following verbs with the correct definition.

1. Feasibility study	a. Building or installation which is built, supplied, or installed complete and ready to operate
2. Site investigation	b. Activities carried out after the project to ensure the problems are solved
3. maintenance	c. details plan of proposed structures
4. soil mechanics	d. dimensions and measurements
5. specification	e. extensive investigation to evaluate the load bearing qualities and stability of the ground
6. Technical drawing	f. Investigation to assess both financial and engineering aspects of a project
7. Commission project	g. Offer of a bid for engineering contract
8. costing system	h. procedure to monitor the costs of a project so that management can be get information on development
9. tender	i. study the proposed location to assess geology the area
10. turnkey project	j. to order a plan to be carried out

(1-), (2-), (3-), (4-), (5-), (6-), (7-), (8-), (9-), (10-)

Question No. two (5 marks):

Complete the following sentences with a form of the word in brackets.

- When working in this area, please wear -----clothing (protect).
- Don't pour used chemicals into the drains as they will cause ----- (contaminate).
- Heating this liquid may cause an ----- (explode).
- These chemicals must be kept in a locked cupboard because they are----- (harm).
- While they repair the roof, we will close this department as a -----measure (precaution).
- health is one part of Health and Safety (occupation).

7. Working in a noisy factory without ear protectors is a-----activity (danger).
8. Petrol and oil are -----chemicals (flame).
9. Make sure the containers are closed ----- (tight).
10. Make sure you are wearing breathing equipment before starting -----(fume).

Question No. three (6 marks):

Answer the following questions.

1. What are the properties of heat radiation waves?
2. Why do architects depend on structural engineers?
3. what is meant by “ sanitary engineering” ?
4. What is the significance of the code of ethics in the engineering profession ?
5. Mention three different machines that generate power.
6. Specify the job of the mechanical engineer in automotive industry and aerospace industry.

Question No. four (5 marks):

Choose the correct word or phrase in each of the following.

1. Every energy cycle involves a (transform, transport, transfer) of heat .

2. Engineers shall uphold and advance (integration, honesty, goodness, commitment), honor and (persistence, perseverance, quickness, understanding, high rank) of the engineering profession..
3. An ideal black body would (reflect, emit, absorb) all the heat falling on it.
4. heat transfer by conduction through a solid by virtue of (temperature difference, pressure difference, motion of the surrounding air)
5. Heat produced by current flow (increases, decreases, has no influence on) the efficiency of electrical machines.
6. In engineering drawing, the graphic language is (indispensable, inadequate, inaccurate).
7. The ellipse is a (drawing instrument, measuring instrument, mathematical curve).
8. Codes of ethic and their acceptance by profession will (finally, quickly, necessarily, as a matter of fact) determine the public's confidence and trust in the engineering profession.
9. If you transfer a file a remote computer to your computer, you (download, upload, run)
10. breach: (involvement, engagement, infringement, adjustment).

Question No. five (5 marks):

Read the following sentence and answer the required between the brackets:

1. Polythene sheets are laid over the wet concrete. This prevents the concrete from drying out too quickly. (link the two sentences using the final-ing clause)
2. The first real road builders in Britain was the Romans. (Find the mistake and correct it)

3. This empirical formula is deficient (for, at, with, in, on, from, about), the effect of external disturbance. (select the correct word).
4. The petrol is mixed with air and injected into the cylinder,.....a spray. (Use of the word " as" to complete the statement)
5. **Rearrange the letters of six sources of energy:**
 1. uns
 2. fbielou
 3. Dwni
 4. Piumutoln
 5. Weva
 6. peumroetl

Question No. six (2 marks):

Translate into Arabic:

Computer Graphic is now extensively used in engineering work. In your career as engineer, you may be involved in the design processes of electric machines or electronic control systems, and these are greatly facilitated through computer graphics. You may also need graphical simulation and animation to model dynamical processes, or to analyze interactions and identify conflicts among system components.

Other applications of a computer graphics include surveying and mapping, structural engineering (CAD/CAM). In surveying and mapping, computer programs allow the engineer to go from field data to finished contour maps in a single step .