



CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

Technical and Vocational Education Examination

JUNE XXXX

INTERMEDIATE LEVEL

Subject Title	QUALITY – HYGIENE – SAFETY AND ENVIRONMENT
Subject Code No.	5420
Paper No.	TWO

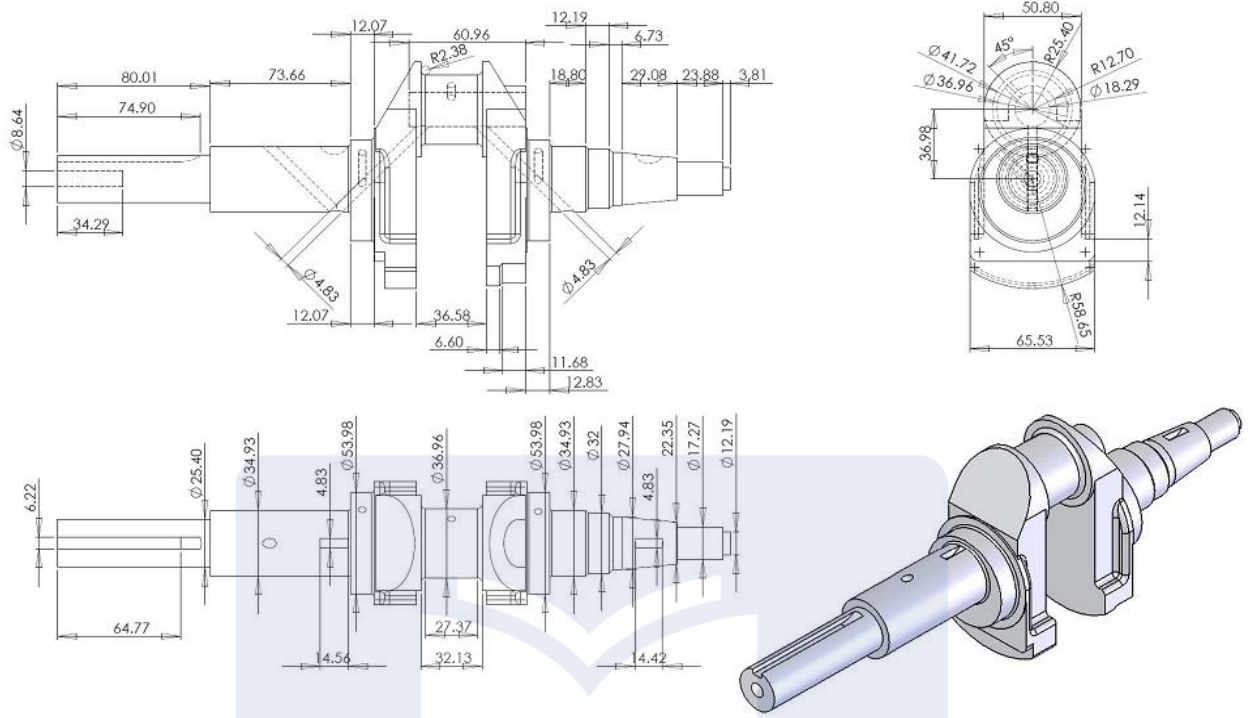
Duration: 2hours

You are reminded of the necessity for good English and orderly presentation in your answers.

Turn Over

PROFESSIONAL SITUATION

Neba and sons Automobile Enterprise specialize in production of crank shaft, their objective is to provide quality product at the right place and time to their customer



Crank shaft

I – FIRST PART: QUALITY (Answer any two questions: 2 x 5 marks = 10 Marks)

- I.1.**
- a) Defined audit. **(0.5 mark)**
 - b) Give two main type of audit. **(1marks)**
 - c) What do you understand as audit of evaluation? **(1mark)**
 - d) Give the principal stages of quality audit. **(1.5 mark)**
 - e) Give two components of non-quality. **(1 mark)**

I.2. In order to improve on the quality of crank shaft, the management decide to seek for an external auditor

- a) Defined external audit **(1 marks)**
- b) Give two advantage and one disadvantage of an external audit **(3 marks)**
- c) what do you understand by audit of certification **(1 marks)**

I.3: Tool of quality, fill Table B, with the corresponding letter representing the quality tool of Table A as shown below **(5 marks)**

Table A

a) To supervise the possible drifts permanently
b) To check the correlation between two sizes, the linearity
c) To seek and determine the whole of the causes which can produce a certain effect
e) To visualize the phenomena, to facilitate comprehension, to communicate easily
f) Nothing to forget, observe and check
g) To release from the significant points, decision-making aid
h) To classify a certain number of proposals in order to determine the priority order of study of it.

Table B

	TOOLS OF QUALITY	DEFINITION
1	GRAPHS	e
2	SHEETS OF CONTROL	
3	DIAGRAM OF PARETO	
4	DIAGRAM CAUSES – EFFECT	
5	GRAPH OF DISPERSION	
6	HISTOGRAM	
7	GRAPH OF CONTROL UNINTERRUPTED	
8	STAMP CLASSIFICATION	

II SECOND PART: HYGIENE (Answer any two questions: 2 x 5 marks = 10 Marks)

An engineer in an automobile work shop suffers from muscular and bone problem when lifting loads, he decides to have knowledge on the skeletal system

II.1

- a) Name the element of the skeletal system. (2 marks)
- b) Give the functions of human skeletal system? (2 marks)
- c) Give two other names for the skeletal system? (1 mark)

II.2.

- a) Give four types of bones? (2 marks)
- b) Fill Table B, with the corresponding letter of Table A defining the terms as shown below. (7 x 0,714mark = 3 marks)

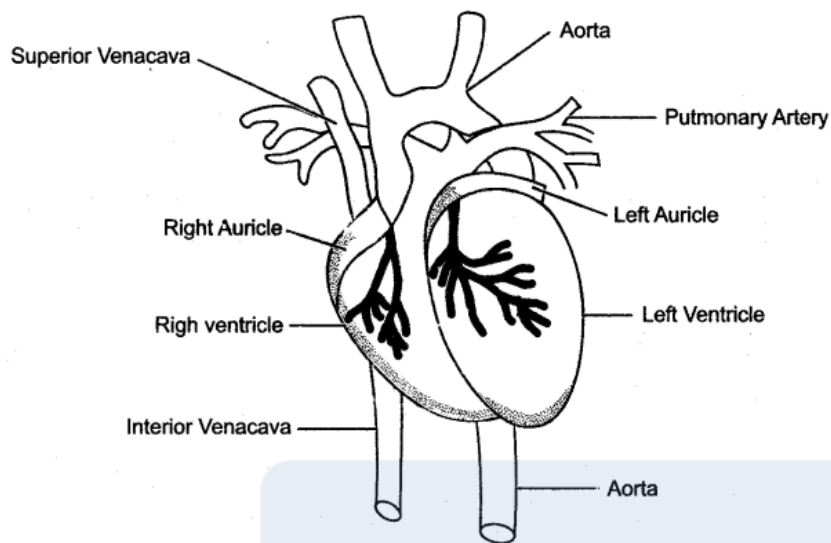
Table A

a) Soft connective tissue found between joints
b) Connective tissue that attaches bone to bone at a joint
c) Connective tissue that attaches muscle to bone
d) Muscle that is controlled by the autonomic nervous system (not consciously controlled)
e) Muscle that can be consciously controlled
f) Muscle tissue that has a striped appearance due to its fiber composition
g) The point at which two (or more) bones meet.

Table B

	Terms	DEFINITION
1	Joint	
2	Striated muscle	
3	Cartilage	
4	Ligaments	
5	Tendons	
6	Voluntary muscle	
7	Involuntary muscle	

II.3. study the diagram below



- a) Give the name of the diagram above. **(1 mark)**
 b) Give the function of each of any four parts labelled on this diagram. **(4x1mark= 4 marks)**

III - THIRD PART: SAFETY *(Answer any four questions: 4 x 5 marks = 20 Marks)*

An automobile workshop is specialized in the fabrication of motor spare parts, the main function comprising of cutting, welding and filing of metals as shown in the diagrams below:



- III.1**
- a) Give three negative effects to human body when carrying out arc welding. **(1.5 mark)**
 b) Give three personal protective equipment a technician should consider before performing arc welding. **(1.5 mark)**

- c) Give the safety distance from welding flash. **(1 mark)**
- d) Define hearing threshold and specify its value for human being. **(1 mark)**

- III.2.** A worker in the mechanical production factory suddenly goes unconscious: **4/10**
- a) List the first aid measures to be applied before the arrival of Doctor. **(1.5 marks)**
 - b) Give possible causes of unconsciousness? **(1.5 marks)**
 - c) When carrying out drilling operation, metal chip mistakenly enters the technician eye, give the first aid measures to take? **(1 marks)**
 - d) Give two reasons for connecting filing machine with insulated conductors? **(1 marks)**

- III.3.** SONARA is an oil refinery company in Cameroon. In 2019 the company witness a fire outbreak that led to the loss of equipment and infrastructures.
- a) List two types of airborne contaminants that can be inhaled, ingested or absorbed in this company?. **(1 mark)**
 - b) Give the likely causes of a fire outbreak? **(2 marks)**
 - c) How can we prevent fire outbreak? **(1 mark)**
 - d) As a technician in the enterprise, give the first measures you are to take when you notice the beginning of fire. **(1 mark)**

- III.4.** Enoni has been recently recruited in a multipurpose workshop. Within the first week he inhaled a large quantity of dust from the woodwork department and ended up in the hospital for treatment.
- a) Could Enoni have avoided these health conditions? Justify your answer **(1.5 mark)**
 - b) Give the system of the body that was affected by the inhalation of dust? **(1mark)**
 - c) Name five common routes for workshop respiratory hazards. **(5x0,5=2.5 marks)**

- III.5.** Two months later, Enoni joined the welding department. The workspace was confined, with no air-monitoring device. One day, during smelting, he started complaining of headache, dizziness, and nausea. Two hours later, he collapsed and was unconscious. The laboratory tests revealed the presence of 800 ppm carbon monoxide in Enoni's lungs.
- a) Justify the presence of carbon monoxide in the workshop. **(2 marks)**
 - b) Describe how carbon monoxide is formed. **(2 marks)**
 - c) Give two effects of carbon monoxide on the respiratory system. **(2 x0.5 mark =1mark)**

IV - FOURTH PART: ENVIRONMENT (Answer any two questions: 2 x 5 marks = 10 Marks)

- IV.1.** A refinery company is specialized in the production of hydraulic oil which is been use for brake pedal and other mechanical components, the oil is been stored in a 1 litter plastic container for distribution and sale to customers; the company faces problems of ecosystem management and pollution.
- a) Defined an Ecosystem. **(1 mark)**
 - b) Explain what you understand by ecological balances. **(2 marks)**
 - c) Defined pollution. **(1 mark)**
 - d) Give three types of pollution. **(1 mark)**

- IV.2 .** It has been noticed that people living in coastal areas or beaches are poorly aware or concern about hazards and do not educate visitors and new residents about natural hazards in their areas or environment.
- a) Give two reason people in such area poorly concern about hazards in their environment? **(2 marks)**
 - b) Give two reasons why coastal communities not educate visitors and new residents about natural hazards in their areas? **(1 mark)**

- c) When is a large event such as a major earthquake not a disaster? **(1mark)**
- d) During natural disaster, people incur sufficient loss of properties and infrastructure, who is most commonly to blame and why? **(2 marks)**

IV.3. In an automobile repair industry, diesel oil is used to lubricate mechanical parts. Peter, the manager of this industry, has difficulties when managing waste oil containers, made from non-biodegradable materials. **5/10**

- a) Give two risks that workers are exposed to when waste oil is spilled on the floor **(1marks)**
- b) Give the difference between biodegradable and non-biodegradable materials. **(1,5 mark)**
- c) Is Waste oil biodegradable? **(0,5 mark)**
- d) Define sustainable development. **(1 mark)**
- e) For environmental protection and economic reasons, name and explain the process to be carried out on waste oil, rather than burning it. **0,5 x 2 = 1 mark**

ANSWER SHEET N ° 01

I - FIRST PART: QUALITY (Answer any two questions: 2 x 5 marks = 10 Marks)**I.1.**

a)

b) Two main type of audit:

c) Audit of evaluation:

d) The principal stages of audit are:

e) Components of non-quality:

I.2.a) *The external audit:*

b) Two advantage and one disadvantage of an audit

Disadvantages:

Advantages:

c) **The audit of certification:**

I.3.

1	GRAPHS	
2	SHEETS OF CONTROL	
3	DIAGRAM OF PARETO	
4	DIAGRAM CAUSES - EFFECT	
5	GRAPH OF DISPERSION	
6	HISTOGRAM	

7	GRAPH OF CONTROL UNINTERRUPTED	
8	STAMP CLASSIFICATION	

7/10

ANSWER SHEET N ° 02

II SECOND PART: HYGIENE (Answer any four questions: 2 x 5 marks = 10 Marks)

II.1

- a) The skeletal system is composed of: _____
- b) The human skeleton performs six major functions: _____
- c) The other two names of skeletal system are: _____

II.2.

- a) _____

b) Table B

	Terms	DEFINITION
1	Joint	
2	Striated muscle	
3	Cartilage	
4	Ligaments	
5	Tendons	
6	Voluntary muscle	
7	Involuntary muscle	

II.3.

- a) _____
- b) _____

III - THIRD PART: SAFETY (Answer any four questions: 4 x 5 marks = 20 Marks)

III.1

a) _____
_____ **8/10**

ANSWER SHEET N ° 03

b) Three protective devices are:

c) Safety distance: _____

d) This is: _____

III.2.

a) _____

b) Possible causes of unconsciousness:

c) First aid measure to remove metal chips: _____

d) It is important to insulate conduct because: _____

III.3.

- a) _____
- b) _____
- c) _____
- d) _____

III.4.

- a) _____
- b) _____
- c) _____

III.5.

- a) _____
- b) _____

c) _____

IV – FIRTH PART: ENVIRONMENT (*Answer any four questions: 2 x 5 marks = 10 Marks*)

IV .1.

a) An ecosystem: _____

9/10

ANSWER SHEET N ° 04

b) Ecological balances: _____

c) Pollution: _____

c) Types of pollution are: _____

IV .2.

a) _____

b) _____

c) _____

d) _____

IV .3.

a) _____

b) Biodegradable products are: _____

c) Oil is: _____

d) Sustainable development is: _____

e) _____

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