

معهد	بكالوريا - علمي	الاسم	الدرجة المستحقة:
مذاكرة لغة إنكليزية - نظام كتابي	Unit 4	التاريخ	الدرجة العظمى: 300

- الصفحة الأولى -

(انتبه إلى رقم السؤال بحيث يتطابق مع رقم الجواب ولا تتقل صيغة السؤال إلى ورقة الإجابة)

**I. Read the following text then do the tasks below.**

During the sixth century AD, the Indian engineers invented the cotton gin, and by the ninth century AD they designed wind-powered machines such as the windmill and the wind pump. Later, the Arab engineers designed the spinning wheel in the early eleventh century. This was essential to the growth of the cotton industry, which was the core of The Early Industrial Revolution in the 18th Century.

The first steam engine was built in 1698 by the mechanical engineer Thomas Savery. The development of this device led to the emergence of the Industrial Revolution in the coming years, which allowed the beginning of the mass production of engines of various functions.

The inventions of the Scottish engineer James Watt gave rise to the modern mechanical engineering, which opened the door wide for the development of specialized machinery and their maintenance tools during the Industrial Revolution and led to the rapid growth of mechanical engineering in its native Britain and abroad.

Chemical engineering, like mechanical engineering, developed in the nineteenth century during the Industrial Revolution. The work of James Maxwell and Heinrich Hertz in the late nineteenth century gave birth to the field of electronics and electrical engineering.

**Answer the following questions: (18 marks)**

- When did Indian engineers invent the cotton gin?
- What did the development of the steam engine lead to?
- How did James Watt's inventions influence mechanical engineering?

**Find words in the text which mean the following:**

(12 marks)

- A machine that separates the seeds of a cotton plant from the cotton.
- Actions performed to keep a machine or system functioning or in service.

**Rewrite these sentences about the text to correct the information:**

(12 marks)

- Chemical engineering emerged before the Industrial Revolution.
- Arab engineers invented the spinning wheel in the ninth century AD.

**II. Read the following text then do the tasks below.**

As a result of the substantial scientific and technological development that affected many disciplines, many branches have appeared within the specialisation of engineering in particular, including medical technology engineering, which is also called biomedical engineering. This field is concerned with studying the body from an engineering point of view, in order to design suitable artificial limbs, organs, or other medical devices.

Medical technology engineering helps doctors define their tasks and facilitates their work more, so the medical device has become an essential assistant for the doctors in all steps, starting from diagnosis, to the end of the treatment course.

Medical devices can be divided into two parts, diagnostic medical devices, most notably the ultrasound device, and medical therapeutic devices used in chemical treatments. Another classification includes three categories. Firstly, we have simple devices such as bandages, body temperature meters and others. There are also more complex devices that require a certain amount of caution, such as those that emit X-rays. Finally, there are those which require a deep study before their use, such as the valves used in the artificial heart, in addition to the artificial joints.

**Choose the correct answer A, B, C or D: (24 marks)**

- Medical technology engineering is also known as ..... engineering.  
A. mechanical                      B. chemical  
C. biomedical                      D. electrical
- One main goal of medical technology engineering is to design .....  
A. medicines only    B. artificial limbs and organs  
C. hospital buildings    D. training programs
- Medical technology engineering mainly supports the work of .....  
A. engineers    B. doctors    C. nurses    D. patients
- Medical devices have become ..... for doctors.  
A. optional    B. essential    C. trivial    D. useless

**Complete the following sentences with information**

**from the text: (12 marks)**

- Bandages are considered .....
- Artificial joints are classified as devices that .....

**III. Choose the correct answer A, B, C or D:**

(54 marks)

14. The ..... of engineering has been around since ancient times.  
A. concept B. elevate C. cure D. gin
15. .... engineering is related to designing, making, and flying planes.  
A. Chemical B. Aeronautical  
C. Electric D. Mechanical
16. Medical engineers work in many fields like well-equipped hospitals and .....  
A. clinics B. garages C. stations D. theatres
17. I have to ..... the car to change the tire.  
A. drive into B. pull down  
C. eat away D. jack up
18. We need to ..... the roof before it falls down.  
A. drive into B. pull down  
C. shore up D. fence off
19. I slipped as I stepped ..... the platform.  
A. into B. to C. onto D. from
20. The vase fell ..... the table.  
A. into B. to C. off D. out of
21. The /d/ sound may disappear in .....  
A. don't know B. lend me  
C. for dinner D. wanted to
22. Ali: What about joining our new project, Tarek?  
Tarek: ..... (Express hesitation)  
A. Sure. I'd love to.  
B. I'm not sure about that.  
C. Certainly! When will we start?  
D. OK. I'll do that.

**IV. Complete the following sentences by filling in each gap with one functional word:**

(18 marks)

23. .... oldest architect, known by name Imhotep,  
24. designed ..... executed the construction of the Pyramid of Djoser in the Saqqara region in  
25. Egypt around 2630-2611 BC, and he ..... also credited with first using columns in architecture.

**V- Write suitable questions about the underlined words:**

(24 marks)

26. The flight from Cairo arrives at 10 o'clock.  
27. We moved the chairs into my bedroom.  
28. The police have fenced off the crime scene to start the investigation.

**VI- Rewrite the following sentences as required in brackets:**

(32 marks)

29. My father didn't mend the car himself.  
(make causative/have something done)  
30. Huda's bag was pulled off her shoulder.  
(make causative/have something done)  
31. Rana cuts her hair herself.  
(make causative/have something done)  
32. The police took Ali's driving licence away.  
(make passive)

**VII- Correct the verbs in brackets:**

(18 marks)

33. My brother (drive) to Homs yesterday.  
34. Last Sunday, we (have) our car repaired.  
35. I (work) for five hours now.

**VIII- Complete the following sentences using clauses:**

(12 marks)

36. Maha entered the room while .....  
37. By the time the lesson finished, .....

**IX- Translation:**

(14 marks)

- Translate the following sentence into Arabic:  
38. Medical engineers work in cooperation with all disciplines like nursing and biology.  
- Translate the following sentence into English:  
39. أنا سأتناول العشاء في المطعم مع عائلتي الليلة.

**X- Write a composition of no less than 80 words on the following topic:**

(50 marks)

**A recent engineering project**

- name the project
- place and time of performance
- advantages and disadvantages
- opinion

- I.**
1. The Indian engineers invented the cotton gin during the sixth century AD.
  2. The development of this device led to the emergence of the Industrial Revolution in the coming years, which allowed the beginning of the mass production of engines of various functions.
  3. His inventions opened the door wide for the development of specialized machinery and their maintenance tools during the Industrial Revolution and led to the rapid growth of mechanical engineering in its native Britain and abroad.
  4. Gin
  5. Maintenance
  6. Chemical engineering emerged after the Industrial Revolution.
  7. The Arab engineers designed the spinning wheel in the early eleventh century.

- II.**
8. C. biomedical
  9. B. artificial limbs and organs
  10. B. doctors
  11. B. essential
  12. Bandages are considered simple devices.
  13. Artificial joints are classified as devices that require a deep study before their use

- III.**
14. A. concept
  15. B. Aeronautical
  16. A. clinics
  17. D. jack up
  18. C. shore up
  19. C. onto
  20. C. off
  21. B. lend me
  22. B. I'm not sure about that.

- IV.**
23. The
  24. and
  25. is

- V.**
26. When does the flight from Cairo arrive?
  27. Where did you move the chairs?
  28. Why have the police fenced off the crime scene?
- VI.**
29. My father (had/got) the car mended.
  30. Huda (had/got) her bag pulled off her shoulder.
  31. Rana (has/gets) her hair cut.
  32. Ali's driving license was taken away (by the police).

- VII.**
33. drove
  34. had
  35. have been working
- VIII.**
36. Maha entered the room while I was having lunch.
  37. By the time the lesson finished, the teacher had left the classroom.
  38. يعمل المهندسون الطبيون بالتعاون مع جميع الاختصاصات مثل التمريض وعلم الأحياء.
  39. I (am going to have/am having) dinner in the restaurant with my family tonight.

**IX.**

Euphrates Dam is one of the most important engineering projects in Syria. It is located near Al-Raqqah city and is considered the largest dam in Syria. Its construction led to the creation of a great lake. The dam was completed in 1973. It was originally built to generate electricity and to irrigate lands on both sides of the Euphrates. The suggested irrigation plan suffered from a number of problems, such as the gypsum content in the reclaimed soil.

**ترجمة الموضوع (للاستئناس)**

يُعدّ سدّ الفرات أحد أهم المشاريع الهندسية في سوريا. يقع بالقرب من مدينة الرقة ويُعتبر أكبر سدّ في البلاد. أدى بناؤه إلى إنشاء بحيرة كبيرة، وهي أكبر خزان مائي في سوريا. اكتمل بناء السد عام ١٩٧٣. وقد شُيّد في الأصل لتوليد الكهرباء وريّ الأراضي على جانبي نهر الفرات. إلا أن خطة الريّ المقترحة واجهت عددًا من المشكلات، مثل وجود الجبس في التربة المستصلحة.