
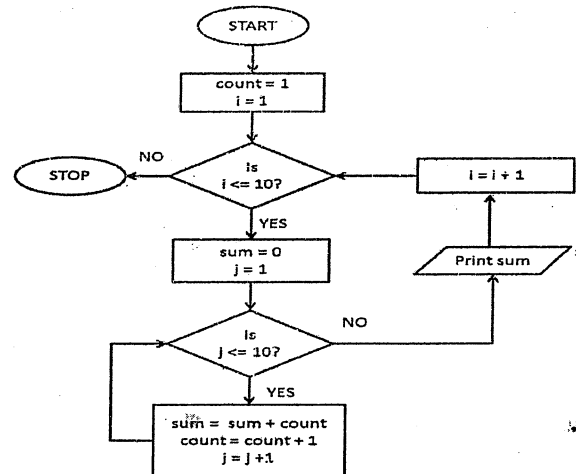




	TANTA UNIVERSITY FACULTY OF COMPUTERS AND INFORMATICS	
	FINAL EXAMINATION FOR (LEVEL 1)	
	COURSE TITLE: BASICS OF COMPUTER SCIENCE	
DATE: 16/1/2024	TIME ALLOWED: 120 MINUTES	

- a) diamond b) rectangle c) circle d) Arrow
16. What is the shape used to make decision?
a) diamond b) rectangle c) circle d) Arrow
17. What is the shape used to make a process?
a) diamond b) rectangle c) circle d) Arrow
18.dividing data into smaller parts called Segments.
a) Segmentation b) Addressing c) Error Detection d) None of above
19.is responsible for making sure that all information required for session opening become ready
a) Session layer b) Transport layer c) Application layer d) Network layer
20.is responsible for End-to-End delivery
a) Session layer b) Transport layer c) Application layer d) Network layer
21.is responsible for Hop-to-Hop data delivery
a) Data link layer b) Physical layer c) Application layer d) Network layer
22.is responsible for cables.
a) Data link layer b) Physical layer c) Application layer d) Network layer
23. What is the value of **sum** after finish the following flowchart?
a) 5050 c) 100
b) 55 d) 101
24. What is the value of **count** after finish the following flowchart?
a) 55 c) 100
b) 101 d) 5050
25. What is the final output for the above flowchart?
a) 55 d) 100
b) 5050 c) None of above
26. What is the shape used to make a connect between two flowcharts?
a) diamond b) rectangle c) circle d) square
27. we use the oval to make
a) Start/stop b) Decision c) Process d) Input/output
28. $(A25.95)_{12} = (?)_{10}$
a) $(1520.7847)_{10}$ b) $(1469.7478)_{10}$ c) $(1520.7478)_{10}$ d) $(1469.7847)_{10}$
29. $(512.25)_6 = (?)_{10}$
a) $(881.47)_{10}$ b) $(881.74)_{10}$ c) $(188.47)_{10}$ d) $(188.74)_{10}$
30. $(CD.85)_{14} = (?)_7$



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- a) (643.14)₇ b) (346.14)₇ c) (643.41)₇ d) (346.41)₇
31. $(512.75)_8 = (?)_{12}$
- a) (632.35B)₁₂ b) (236.35B)₁₂ c) (236.B53)₁₂ d) (632.B53)₁₂
32. $101100 - 100110 - 100011 =$
- a) (+ 1D)₁₆ b) (- 1D)₁₆ c) (+2C)₁₆ d) (- 2C)₁₆
33. $(432+334-420-123*3)_5 =$
- a) (+23)₅ b) (-23)₅ c) (+33)₅ d) (- 33)₅
34. $(AA34-89A5-25*A1)_{12} =$
- a) (+6)₁₂ b) (-6)₁₂ c) (+26)₁₂ d) (- 26)₁₂
35. $(AEEE-BCDB-BACD+125*E2)_{15} =$
- a) (+3630)₁₅ b) (-3630)₁₅ c) (+3B30)₁₅ d) (- 3B30)₁₅
36.process of adding control information as it passes down through the layered model
- a) Encapsulation b) Decapsulation c) Protocol d) System Software
37. source or destination device in a networked system. for example, a user's PC and mobile, and so is a server
- a) End Device b) Switch c) Router d) None of above
38. is the device that support by software different communication technologies
- a) End Device b) Switch c) Router d) None of above
39. Router is a device in OSI Model
- a) Layer 3 b) Layer 4 c) Layer 7 d) All of above
40. Switch is a device in OSI Model
- a) Layer 5 b) Layer 4 c) Layer 3 d) Layer 2
41. Is used for sending E-mails.
- a) POP3 b) HTTP c) SMTP d) DSL
42. HTTP is used for
- a) Browsing b) Remote login c) Sending E-mail d) Upload files
43. is one of WAN cards.
- a) DSL b) HDCL c) All of above d) None of Above
44. Topology is pcs connected together in close circle.
- a) Mesh b) Ring c) Star d) Peer to Peer
45. What is the output for the following flowchart if user enter 7 in the 5 times?

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- a) 5
- b) 25

- c) 35
- d) None of above

46. $1001011011 + 1001111001 + 100110101 =$

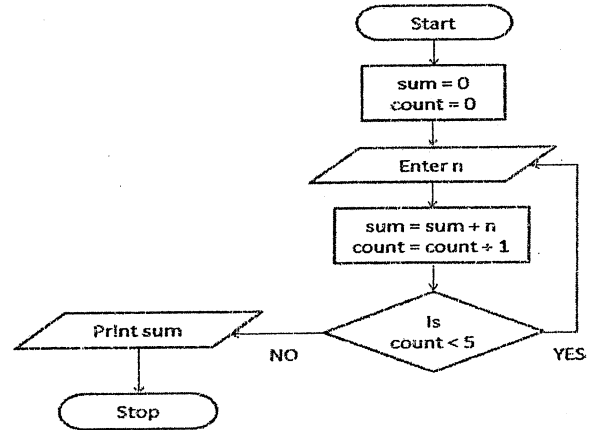
- a) 10101101001
- b) 11000001001
- c) None of Above
- d) 11001101101

47. $10110100 - 1011011 - 1111101 =$

- a) $(-24)_8$
- b) $(-44)_8$
- c) None of Above
- d) $(-36)_8$

48. What is the value of **count** when finish this flowchart?

- a) 15
- b) 5
- c) 6
- d) 1



49. All ports on the device can support only single communication technology

- a) Router
- b) Switch
- c) Personal computer
- d) All of Above

50. ports on the device can support different communication technologies?

- a) Rou
- b) Switch
- c) Personal computer
- d) All of Above



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EXAMINATION FOR (LEVEL I)	
COURSE TITLE: ENGLISH	COURSE CODE:

I-A-Read the following passage and answer the questions:

Almost everyone knows about the Internet. More than a billion people around the world are now online. The Internet is a powerful tool for information and communication. The basic concept of the Internet was first thought of in the early 1960s. It began as a military research network, designed to be decentralized or spread out over many locations. If one location was attacked, the military could communicate from another location. The first small network went online in 1969. It connected four universities in the United States. This network was very successful from the beginning. Scientists could now share information about their research. In 1972, email was invented and quickly became the most popular application. By the end of that year, the network connected many universities and government research centers. The general public became aware of the network in the late 70s. A new version allowed anyone to get online. People from all over the world joined online groups to talk about thousands of different subjects. The term Internet was used for the first time in 1982. New technology had created a common language for the network computers. The Internet was now recognized as an international network. This was also at the time when privacy and security started becoming important issues. Hackers and viruses began to emerge. In 1990, the original military network went offline, and a year later the World Wide Web was born. The World Wide Web is in fact a browser for the Internet -a kind of software program that allows users to access and navigate within information on the net. With the introduction of the World Wide Web, the development of the Internet accelerated at a rapid pace. The first computer code of the web was created in 1991 allowing programmers to combine words, pictures, and sounds on web pages.

In the early nineties, the first search engine, Gopher, and the first web browser, Mosaic, were developed, allowing easier and simpler access to the Net. Traffic on the Internet started growing at an annual rate of approximately 340,000 percent. At the end of the 1990s, Internet was born. Internet uses fiber optic cables to link together a consortium of hundreds of big-speed networks around the world. Instead of connecting to the Internet solely through telephone lines, people could now connect in a wide variety of ways, including via satellite. These new methods have more data carrying capacity, or bandwidth, than telephone lines. This made the Internet faster and able to convey much more information. People could soon watch TV shows and movies online. In the future, people will not need a computer to access the Internet. The browser will become a platform for the Web. Information will no longer need to be stored in a computer hard drive. Instead, it will be stored in places around the world. People can retrieve it through cell phones, music players, and other portable devices. This is called 'cloud computing,' because it seems as if information floats down from the sky. A 2008 study said that the Internet will continue to grow. By 2020, a low-cost global network will allow people even in remote areas to have Internet access. English 'will remain the primal' language, but other languages, especially Mandarin, will increase. Also, a segment of society will refuse to use the Net and live without modern technology.

Decide if the following statements are True or False:

1. The first small network went online in 1969.
2. Gopher was the first Internet search browser.
3. The Internet allowed people to watch TV online.
4. By 2020, English will no longer be the primary language of the Internet.
5. Mosaic is an Internet-based technology.
6. The first computer virus probably appeared in the late 70s.
7. The first small network was of no value for scientists.
8. In the future, people will no longer need computers to access the Internet.
9. People could now connect to the internet via satellite only.
10. Information must be stored in a computer hard drive.

B-Read the following passage and answer the questions

1-The legend of the mysterious Bermuda Triangle is one of the strangest of all sea stories. The Bermuda Triangle is a section of the Atlantic Ocean off the southeastern coast of Florida. A line drawn from Florida to Bermuda, then to Puerto Rico and back to Florida, forms a rough triangle. Within this triangle, or very near it, more than fifty ships and airplanes have vanished or disappeared.

2-The legend began in 1945, when five American Navy bombers vanished while flying over the area. They were flying during the day, under clear weather conditions. The commander of the five planes was talking to his base by radio. He announced that they seemed to be lost. After that, the planes were never heard from again. A search plane was sent out to find the five. It too disappeared.

3-In 1948, an airliner flying toward Miami vanished over the Triangle. A few months later, another plane disappeared. In 1950, still another airplane flew into the Triangle, never to be seen again. A ship named The Sandra sailed into the triangle and vanished. In 1953, another ship, sailing north of the Triangle, sent out distress signals that were suddenly cut off. Ships and planes were sent to search for the ship, but they never found it.

4- There have been many explanations for these mysterious happenings. Some people believe that there is a strange force at work in this part of the ocean. Some suggest there may be some kinds of 'hole' in the triangle that ships and planes go through into another world. Others think that UFO's steal the planes, ships, and their crews, and take them away.

5- Some people don't believe that there is anything extraordinary about the Bermuda Triangle. Thousands of ships and airplanes have passed through the Triangle without encountering trouble. The Triangle isn't the only place where ships and planes have vanished. Many ships have vanished all over the world's oceans. Many reasons exist for such things happening, such as sudden storms or seaquakes. These are just some of the dangers of going to sea. The Bermuda Triangle just happens to be a part of the sea where there have been many disasters. Whatever the reasons for these strange happenings, the legend of the Bermuda Triangle remains the strangest of all sea tales.

Decide if the following statements are True or False:

11. Paragraph 1 is mainly talking about why Bermuda Triangle is mysterious.
12. The underlined word "bombers" in paragraph 2 probably means ships.
13. According to Paragraph 2, the total number of the American airplanes that disappeared in 1945 in Bermuda Triangle was six.
14. The underlined pronoun " it" in paragraph 2 refers to the search plane.
15. Paragraph 3 is mainly talking about how ships and airplanes disappear in Bermuda Triangle
16. The main idea of Paragraph 4 is giving explanations why ships and airplanes disappear in Bermuda Triangle.
17. In the last paragraph, we see some people who don't think that Bermuda Triangle is an extraordinary place.
18. The legend of the Bermuda Triangle is rarely considered strange among sea tales.

C-Read the following sentences and decide if they are grammatically True or False:

- 19- Yachting attracts many of the world's most famous and wealthy people.
- 20- That species of butterfly are commonly seen in many parts of North and South America.
- 21- Some people suffer from doing too hard work.
- 22- I liked the restaurant but the food wasn't enough.



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- 23- "uncapable" is the negative form of "capable".
24- Big Joe saw the police car coming up behind, so he turns into the next alley.
25- If the trained seal won't eat its dinner, throw it into the lion's cage.

II-A- Read the following passage and answer the questions:

Have you ever thought of studying abroad? Four students who studied abroad relate their experiences ...

A. Divya Singh from Cardiff went to Chile

I went to a talk given by a couple of older students who had been on an exchange programme the previous year, and it occurred to me that if I could persuade my mum, this would be just the sort of break from normal school routine that I needed. I filled in my application while holding out little hope of being selected. However I was, and was soon immersed in a totally different educational culture, which helped me to appreciate many aspects of my school back home. Another great advantage of my year abroad was that I picked up Spanish much more quickly than in classes back home and, because my teachers were pretty demanding, I even feel confident writing it now. As a result, I'm considering doing Spanish and Latin American studies at university and perhaps after that going into the diplomatic service.

B. Bruce Brown from Sydney went to England.

Although my parents had insisted that I went, I knew what a sacrifice they were making to pay for my year abroad, so I was determined to make the most of the opportunity. My host family was really welcoming, but what I found hard to get used to were the seemingly endless days of grey drizzle and the fact that it got dark so early in winter. Even so, I took every chance to get out and meet people, make friends and get a real, in-depth experience of English life. At the same time, I was keen to make an impact at school and get good grades, although I found the schoolwork quite challenging and not really the highlight of my stay. Even so, I learned far more than I expected, made a lot of friends and came away with the impression that the British are a lot more interesting than I had been given to expect by people back home.

C. Nelson Grace from Boston went to New Zealand

I lived on a farm on South Island, where my host family had a vast flock of about 3,000 sheep. Being a city boy, the experience of farming life was totally novel, but I loved it and took every opportunity to go out and help with the work of the farm. I also got involved in lots of sporting activities with my school, including sailing, rugby and skiing – all firsts for me. I found New Zealanders so enthusiastic about everything that I used to get up with a buzz of excitement and, unlike back home, I actually looked forward to going into school every day. I also think I matured a lot during my year abroad. I'm not so dependent now on my family or my teachers to make me study, and I've learned to get on with all sorts of different people, even if they're not my type. I've also learned a bit about the value of money!

D. Carmen Echevarria from Bilbao went to Scotland

After four years in a state secondary school in Bilbao, it was a huge shock to find myself in a private all-girls school in the Highlands of Scotland, where everyone wore uniforms. Studying there was a complete revelation to me: gone were the hours spent in the evenings memorising huge numbers of useless facts for tests the next day which I would forget as soon as the test was over. Instead, we spent a lot of time discussing issues, solving problems and writing creatively. I missed my friends back home, but really appreciated learning to think in new ways and seeing that education could be so creative. I missed not sharing my classes with boys, but on the other hand, we probably concentrated harder and may have felt more relaxed about the opinions we expressed.

For questions 1–10, choose the students A–D.

Which person

was surprised by the different approach to education? 1/.....



Evaluate the following functions using L'Hopital's Rule

1- $\lim_{x \rightarrow 0} (\csc x - \cot x)$
 a- 1 b- $x/\sec x$ c- $1/\tan x$ d- 0

2- $\lim_{x \rightarrow 1} \left(\frac{x}{x-1} - \frac{1}{\ln x} \right)$
 a- 2 b- $\sin 2x/x$ c- $1/2$ d- 0

Find dy/dx for the following functions:

3- $y = \tan^3(\sin(x^3))$

a- $y = 3\tan^2(\sec^2(\cos x^3))3x^2$ b- $y = 3\tan^2(\sin x^3) * \sec^2(\sin x^3) * 3x^2 \cos x^3$

c- $y = 3\tan^2(\sin x^3) * \cos x^3 * 3x^2$

4- $Y = \ln(\ln(\cos^2 x))$

a- $\frac{1}{(\ln(\cos^2 x))} * -\frac{\sin x}{\cos x}$

b- $\frac{2}{(\ln(\cos^2 x))} \cos^2 x \cos x \sin x$

c- $\frac{-2 \tan x}{(\ln(\cos^2 x))}$

5- $y = (\sin^{-1} x)^{\cosh x}$

a- $\frac{dy}{dx} (\cosh x * \ln(\sin^{-1} x))$ b- $(\sin^{-1} x)^{\cosh x} * \frac{dy}{dx} (\ln(\sin^{-1} x))$ c- $(\sin^{-1} x)^{\cosh x} * \frac{d}{dx} (\cosh x * \ln(\sin^{-1} x))$

Find the value of the hyperbolic functions: 6- $\text{Sech } x$

a- $\frac{e^x - e^{-x}}{e^x + e^{-x}}$

b- $\frac{2}{e^x + e^{-x}}$

c- $\frac{e^x + e^{-x}}{e^x - e^{-x}}$

d- $\frac{e^x + e^{-x}}{2}$

Differentiate the inverse of trigonometric functions: 7- $\csc^{-1} x$ **c** 8- $\sin^{-1} x$ **a**

a- $1/\sqrt{1-x^2}$ b- $1/|x|\sqrt{1-x^2}$ c- $-1/|x|\sqrt{x^2-1}$ d- $1/|x|\sqrt{x^2-1}$

9- find the first term of $y^{(90)}$ of the function $y = x^3 e^{5x}$

a- $X^3 (5^{90} e^{5x})$

b- $89 * X^3 (5^n e^{5x})$

c- $X^3 (5^{99} e^{5x})$

10 - Select the third term of the Taylor series generated by $1/x$ at $x=2$

a- $\frac{1}{8} (x-2)^2$

b- $\frac{1}{8} (x-2)^3$

c- $\frac{9}{2!} x^2$

d- $\frac{9}{3!} (x-2)^3$

11- $f(x) = t - \sin t$ and $y = 1 - \cos t$ find dy/dx

a- $\frac{\sin t}{1+\cos t}$

b- $\frac{\sin t}{1-\cos t}$

c- $\frac{\cos t}{1+\cos t}$

d- $\frac{\sin t}{1+\sin t}$

Integrate the inverse of trigonometric functions: 12- $1/\sqrt{1-x^2}$ 13- $1/x\sqrt{x^2-1}$

a- $\tan^{-1} x + c$

b- $\sin^{-1} x + c$

c- $-\cot x^{-1}$

d- $\sec^{-1} x + c$

14- Find a R.F. for $I_n = \int (\ln x)^n dx$

- a- $x(\ln x)^n - nI_{n-2}$
- b- $x(\ln x)^n - nI_{n-1}$
- c- $x(\ln x)^{n-1} - nI_{n-1}$

15- $\int \coth x dx$

- a- $\ln|\sin x| + c$
- b- $\ln|\cosh x| + c$
- c- $\ln|\sinh x| + c$

16- $\int \frac{x+1}{x^2-6x+25} dx$, if $u=x-3$ $du=dx$

- a- $\frac{1}{2} \ln|u^2 + 16| + \left(\frac{u}{4}\right) + c$
- b- $\frac{1}{2} \ln|u^2 + 16| + \tan^{-1}\left(\frac{u}{4}\right) + c$
- c- $|u^2 + 16| + \left(\frac{u}{4}\right) + c$

17- $\int (e^{2x} + 3)^4 e^{2x} dx$

- a- $\frac{1}{2} \frac{(e^{2x}+3)^5}{5} + c$
- b- $\frac{1}{2} (e^{2x} + 3)^5 + c$
- c- $(e^{2x} + 3)^5$

18- $\int x\sqrt{3x^2 - 5} dx$

- a- $\frac{(3x^2-5)^{3/2}}{3/2} + c$
- b- $\frac{(3x^2-5)^{3/2}}{6} + c$
- c- $\frac{(3x^2-5)^{1/2}}{9} + c$
- d- $\frac{(3x^2-5)^{3/2}}{9} + c$

19- Find a R.F. for $I = \int \cos x e^x dx$

- a- $\frac{e^x \cos x + e^x \sin x}{2} + c$
- b- $e^x \cos x + e^x \sin x + c$
- c- $\cos x + e^x \sin x$
- d- $e^x \cos x + \sin x$

With best wishes

Dr. Nancy Elhefnawy