ALGO
QCM

1. **Une constante est une fonction qui ?**
   (a) possède au moins un argument défini
   (b) possède au moins un argument prédéfini
   (c) ne possède aucun argument
   (d) ne retourne rien

2. **Un observateur ?**
   (a) possède au moins un argument défini
   (b) possède au moins un argument prédéfini
   (c) retourne un résultat de type défini
   (d) retourne un résultat de type prédéfini

3. **Quels problèmes se posent lors de la conception d'un type algébrique abstrait ?**
   (a) Complétude
   (b) Conséquence
   (c) Consistance
   (d) Complémentation

4. **Une opération qui n'est pas définie partout est ?**
   (a) Une opération ponctuelle
   (b) Une opération auxiliaire
   (c) Une opération partielle
   (d) Une précondition

5. **Pour la déclaration**

```
TYPES   vrai
UTILISE mais, incroyable
```

   l'opération `c'est : incroyable x mais -> vrai` **est ?**
   (a) Un observateur
   (b) Une opération interne
   (c) Une opération externe
   (d) Un observeur

6. **Les éléments qui ne composent pas la signature d'un type abstrait sont ?**
   (a) Les TYPES
   (b) Les OPERATIONS
   (c) Les AXIOMES
   (d) Les PRECONDITIONS

7. **Les TYPES servent à préciser ?**
   (a) Les types définis
   (b) Les types prédéfinis

8. **Un type algébrique abstrait est composé ?**
   (a) d'une signature ou d'un système d'axiomes
   (b) d'une signature et d'un système d'axiomes

9. **Les AXIOMES ?**
   (a) permettent de déduire une valeur pour toute application des observateurs aux opérations internes
   (b) permettent de déduire une valeur pour toute application d'une opération interne aux observateurs

10. **Les PRECONDITIONS servent à préciser le domaine de définition ?**
    (a) Des opérations ponctuelles
    (b) Des opérations auxiliaires
    (c) Des opérations partielles

S1 CIE MCQ 2

3/10/2022

Grammar

21. The train to London ___ promptly at 7 :13 A.M. daily.

A) is departing
B) departs
C) depart
D) departed

22. This morning, the train ____.

A) does not run
B) is not running
C) has not ran
D) are not running

23. Right now, the engineers ____ to figure out the problem.

A) try
B) will try
C) have tried
D) are trying

24. It is now 7 :30 A.M., but the passengers ____ for the train.

A) are still waiting
B) still wait
C) still waited
D) will still wait

25. Mike ____ the train to London every morning.

A) is taking
B) take
C) takes
D) have taken

Deadly Mistakes

Which part of the following sentences has a mistake?

26. The government (1) is trying (2) to determinate (3) a solution for the energy crisis. (4)

A) 1
B) 2
C) 3
D) 4

27. People (1) don't wear (2) hats much (3) nowaday. (4)

A) 1
B) 2
C) 3
D) 4

28. He no longer (1) depends (2) of (3) his parents for money. (4)

A) 1
B) 2
C) 3
D) 4

29. Your son is (1) now old enough (2) to make her (3) own decisions. (4)

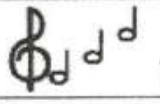
A) 1
B) 2
C) 3
D) 4

30. She is agreed (1) to sell (2) him the (3) house.

A) 1
B) 2
C) 3
D) no mistakes

Questions 31-35 refer to the following Web page and e-mail.

http://www.Hardewickes.co.uk



Hardewicke's

The finest musical treasures in London!

Explore and take home some of London's rich history. The artifacts are a window into the creative minds that make up London's musical spirit.

Our collection spans musical genres from rock and roll to opera, highlighting England's great artistic contributors. The store features artists from the 1800s to rising stars seen on television today.

Click on the links below to view some of our current products. Electronic checkout is available.

Records, CDs, Tapes: £10 and up

Songbooks, signed first-edition books: £15 and up

Apparel: £30 and up

Original artwork: £50 and up

Instruments: £100 and up

We have even more in our shop, and the best pieces are often bought before they make it to the Web site! For the full experience, please visit us.

From:	Sophie Calvert
To:	Hardewickes@londonloc.co.uk
Re:	Mark Peckham Item
Date:	February 1

To Whom It May Concern:

I have a guitar that was previously owned by Mark Peckham. I found your Web site and thought that Hardewicke's might be interested in purchasing it for resale.

The guitar was custom-made for Mr. Peckham by his close friend Elizabeth Dangerfield to celebrate the successful release of his first album. He took it on tour with him around the country as well as abroad. The guitar was purchased by my father at a charity auction hosted by Mr. Peckham 20 years ago.

Please let me know what your purchasing procedures are and whether you buy items up front or take a percentage of the transaction when you resell the item.

Thank you,

Sophie Calvert

31. What is NOT suggested about Hardewicke's?
    - a. It has items from many different years.
    - b. Its products represent numerous types of music.
    - c. It guarantees the lowest prices on records and songbooks.
    - d. It features products from English musicians.

Turn to the next page

32. What is indicated about Hardewicke's?
    a. It was started by a musician.
    b. It plans to host a performance by Mr. Peckham.
    c. It advertises at concerts.
    d. It sells items directly from its Web site.

33. What is the lowest price Ms. Calvert's item would most likely sell for at Hardewicke's?
    a. £10
    b. £30
    c. £50
    d. £100

34. What is suggested about Ms. Calvert?
    a. She saw Mr. Peckham perform in England.
    b. She owns an item made by Ms. Dangerfield.
    c. She has previously worked with Hardewicke's.
    d. She would like to make a donation to her father's charity.

35. What does Ms. Calvert ask about?
    a. The price of an instrument she saw at the store
    b. The procedure for renting a concert space
    c. The process for selling items to Hardewicke's
    d. The history of an item she wants to purchase

Turn to the next page

Questions 36-40 refer to the following list, schedule, and e-mail.

Books by James Trozelli

The History of Jeans
Where did it all begin? Trozelli visually chronicles the evolution of jeans through the centuries, from working wear to high fashion.

Look Past the Runway
Trozelli captures the creative process of some of the top designers from New York City to Paris. Spanning almost twenty years, the book is filled with Trozelli's photographs and shows what goes on in fashion houses before designs are ready for the runway.

Growing Into Clothes: My Story
An amusing memoir about growing up in the fashion world. Trozelli writes about his unconventional upbringing in New York City with parents who began as fashion models before launching their own design label.

Yards of Talent: A Decade of Style
A collection of Trozelli's images spanning a decade of fashion and revealing what was in style, what was out of style, and then what was back in style again.

http://www.btwradio.com

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BTW Radio

Evening Programming, September 23

6:00—*On the Table*
Host Amanda Fry talks about the latest super foods; what they are, what they offer, and how best to prepare them. Featured recipes will be available on our Web site after tonight's show.

7:00—*Candid Now*
Host Britta Jung interviews photographer and author James Trozelli about what prompted him to write his latest book about his childhood. He shares stories about what it was like to grow up in the world of fashion.

8:00—*Tech Talk*
Host Lewis Pierce focuses on the latest electronics. He discusses products that are really innovative and useful and identifies those that are not.

E-Mail Message

To:	listenercomments@btwradio.com
From:	cogilvie@sunmail.net
Date:	September 24
Subject:	Radio Interview

I discovered BTW Radio over 20 years ago and have been a regular listener of your evening programming for at least a decade. I just want to say how much I enjoy your newest offering. I've been interested by many of the authors that have been featured on the show so far, but last evening's guest was especially entertaining. I remember James from when he was a little boy. I worked with his parents when they lived in New York, and I recall seeing James in his parents' studio most days after he got out of school. I was surprised to learn that he has written about his childhood, and I look forward to reading his new book.

Thank you for the excellent program.

Calista Ogilvie

7.

36. What is one common feature in all of Mr. Trozelli's books?
    a. They contain fashion photographs.
    b. They focus on famous models.
    c. They are set in New York City.
    d. They follow events over multiple years.

37. What book did Mr. Trozelli discuss on BTW Radio?
    a. The History of Jeans
    b. Look Past the Runway
    c. Growing Into Clothes: My Story
    d. Yards of Talent: A Decade of Style

38. What is indicated about Candid Now?
    a. It is broadcast every morning at 7:00.
    b. It was recently added to BTW Radio.
    c. It is hosted by Amanda Fry.
    d. It was moved to a new time.

39. In the e-mail, the word "regular" in paragraph 1, line 1, is closest in meaning to
    a. orderly
    b. typical
    c. frequent
    d. complete

40. What is probably true about Ms. Ogilvie?
    a. She has worked in the fashion industry.
    b. She has interviewed Mr. Trozelli.
    c. She was featured on Tech Talk.
    d. She hosts a radio program.

QCM Physique/Electronique – InfoS1

Pensez à bien lire les questions ET les réponses proposées

Q41. Le vecteur unitaire $\vec{u}_\theta$ des coordonnées polaires vérifie

a. $\frac{d\vec{u}_\theta}{dt} = -\dot{\theta}\vec{u}_\rho$

b. $\frac{d\vec{u}_\theta}{dt} = \vec{0}$

c. $\frac{d\vec{u}_\theta}{dt} = \dot{\theta}\vec{u}_\rho$

d. $\frac{d\vec{u}_\theta}{dt} = \dot{\theta}\vec{u}_\theta$

Q42. Le vecteur unitaire $\vec{u}_\rho$ des coordonnées polaires vérifie

a. $\frac{d\vec{u}_\rho}{dt} = -\dot{\theta}\vec{u}_\theta$

b. $\frac{d\vec{u}_\rho}{dt} = \vec{0}$

c. $\frac{d\vec{u}_\rho}{dt} = \dot{\theta}\vec{u}_\theta$

d. ~~$\frac{d\vec{u}_\rho}{dt} = \dot{\theta}\vec{u}_\theta$~~

Q43. Quelle expression correspond au vecteur vitesse instantanée en coordonnées cartésienne ?

a. $v(t) = \sqrt{x(t)^2 + y(t)^2 + z(t)^2}$

b. $\vec{v}(t) = \dot{x}(t)\vec{u}_x + \dot{y}(t)\vec{u}_y + \dot{z}(t)\vec{u}_z$

c. $\vec{v}(t) = \sqrt{\dot{x}(t)^2 + \dot{y}(t)^2 + \dot{z}(t)^2}$

d. $\vec{v}(t) = \frac{d^2}{dt^2}\overrightarrow{OM}(t)$

Q44. Quelle expression correspond à la norme du vecteur accélération instantanée en coordonnées cartésiennes ?

a. $\vec{a}(t) = \begin{pmatrix} \dot{x}(t) \\ \dot{y}(t) \\ \dot{z}(t) \end{pmatrix}_{(\vec{u}_x,\vec{u}_y,\vec{u}_z)}$

b. $a(t) = \sqrt{\ddot{x}(t)^2 + \ddot{y}(t)^2 + \ddot{z}(t)^2}$

c. $\vec{a}(t) = \frac{d^2}{dt^2}\overrightarrow{OM}(t)$

d. $a(t) = \frac{dx(t)}{dt}\vec{u}_x + \frac{dy(t)}{dt}\vec{u}_y + \frac{dz(t)}{dt}\vec{u}_z$

Q45. Le vecteur position en coordonnées cylindriques s'écrit :

a. $\overrightarrow{OM}(t) = \rho\vec{u}_\rho + \theta\vec{u}_\theta$

b. $\overrightarrow{OM}(t) = \rho\vec{u}_\rho + z\vec{u}_z$

c. $\overrightarrow{OM}(t) = \rho\vec{u}_\rho$

d. $\overrightarrow{OM}(t) = \rho\vec{u}_\rho + \theta\vec{u}_\theta + z\vec{u}_z$

Q46. Qu'est-ce qu'un déplacement ordonné de charges électriques ?

a- Un courant
b- Une tension
c- Une résistance
d- Rien de tout cela

Q47. Une différence de potentiels entre 2 points est :

a- Un courant
b- Une tension
c- Une résistance
d- Rien de tout cela

Q48. L'intensité du courant qui entre dans un générateur est inférieure à l'intensité de celui qui en ressort.

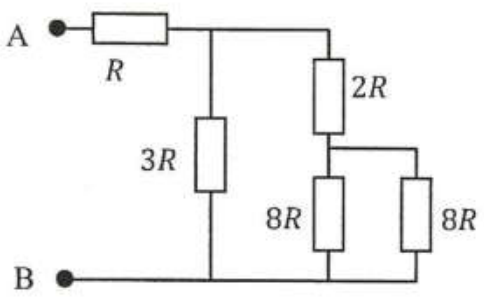
a- VRAI
b- FAUX

Q49. Pour mesurer l'intensité d'un courant dans un dipôle, on utilise un ampèremètre branché en parallèle avec ce dipôle.

a- VRAI
b- FAUX

Q50. Quelle est la résistance vue entre A et B ?

a. $15R$
b. $\frac{28R}{33}$
c. $\frac{R}{3}$
d. $3R$



QCM 1
Architecture des ordinateurs

Lundi 3 octobre 2022

Pour toutes les questions, une ou plusieurs réponses sont possibles.

51. Combien de symboles différents possède la base 17 ?
    - A. 16
    - B. 17
    - C. La base 17 n'existe pas.
    - D. Aucune de ces réponses.

52. Dans quelle base est représenté le nombre suivant : 127532 ?
    - A. Base 5
    - B. Base 6
    - C. Base 7
    - D. Aucune de ces réponses.

53. Quel est le poids du chiffre 3 dans le nombre suivant : 41320_8 ?
    - A. 3
    - B. 8
    - C. 64
    - D. Aucune de ces réponses.

54. Quel(s) nombre(s) n'est pas (ne sont pas) correct(s) ?
    - A. 1011000100012_3
    - B. 172820_8
    - C. $CA590_{12}$
    - D. $CAFE_{16}$

55. Quel est le résultat de la soustraction suivante : $1000_{20} - 1_{20}$?
    - A. FFF_{20}
    - B. JJJ_{20}
    - C. $1FFF_{20}$
    - D. Aucune de ces réponses.

56. Quel est le résultat de l'addition suivante : $109_{16} + 1_{16}$?
    - A. 110_{16}
    - B. $A00_{16}$
    - C. $10A_{16}$
    - D. Aucune de ces réponses.

57. Quel nombre est égal à 2^{12} ?
   A. 10000000000000_2
   B. 2000_{16}
   C. $2^{14} - 2^{13} - 2^{12}$
   D. Aucune de ces réponses.

58. $\frac{(4^4 \cdot 1024^{-2}) \cdot (50+14)^{-3}}{(4^{-2} \cdot (2^4 - 2^3))^3 \cdot 64^{-5}} =$
   A. 0,125
   B. 2^{-63}
   C. 2^{63}
   D. Aucune de ces réponses.

59. 512 Gib =
   A. 2^{33} bits
   B. 2^{36} bits
   C. 2^{39} bits
   D. 2^{39} octets

60. 1 Mio =
   A. 2^{23} octets
   B. 2^{20} bits
   C. 1024 Kib
   D. Aucune de ces réponses.

12