Kuwait University

Office of Assistant Vice President for Evaluation and Measurement

Academic Aptitude Tests

Student Name	Version A

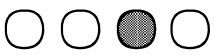
Civil ID No.

Instructions:

1. The aptitude tests consist of three tests.

Test	Number of Questions	Time
English	85	1 Hour
Mathematics	20 (No Calculator)	1 Hour
Chemistry	25	1 Hour

2. Mark all your answers on the **Answer Sheet** and in the proper section**.** On your answer sheet as shown below, using a pencil, darkenthe proper circle.



3. Verify all personal and test data on answer sheet and don't make any changes unless approved by the proctor.
4. Write down your name and Civil ID# on the test booklet.
5. Copy the test's version on your answer sheet.
6. Follow the proctor's instruction during the test.
7. During testing, be quite and avoid any cheating situation.
8. Observe the allocated and the announced time for each test.

1. Simplify: $\dfrac{(a^{-2}b)^{-4}(ab)^{-3}}{a^{-4}}$

(a) $\dfrac{a^5}{b^7}$ (c) $\dfrac{a^{-5}}{b^{-7}}$

(b) $\dfrac{a9}{b^{-7}}$ (d) $\dfrac{a^9}{b^7}$

2. The solution set of $|2x+1| = 1$ is:

(a) $\{0\}$ (c) $\{1, -1\}$

(b) $\{-1\}$ (d) None of the previous

3. Find the domain of $f(x) = \begin{cases} \sqrt{x-5} & \text{if } x > 3 \\ \dfrac{1}{x+5} & \text{if } x < 0 \end{cases}$

(a) $\Re \setminus \{-5\}$ (c) $(-\infty, 0) \cup (3, \infty)$

(b) $(-\infty, -5) \cup (-5, 0) \cup [5, \infty)$ (d) $[5, \infty)$

4. $\left(\dfrac{9}{4}\right)^{\frac{-5}{2}} \left(\dfrac{2}{3}\right)^{-3} =$

(a) $\left(\dfrac{2}{3}\right)^2$ (c) $\left(\dfrac{3}{4}\right)^2$

(b) $\dfrac{9}{4}$ (d) $\dfrac{3}{2}$

5. If $x^3 < 0$, then $\sqrt{25x^2} + 5x =$

(a) $5x^{\sqrt{2}} + 5x$ (c) 0

(b) $10x$ (d) None of the previous

6. If $f(x) = \dfrac{x^2}{2x^2 + 5x + 3}$, then $f(x + 1) =$

(a) $\dfrac{x^2 + 2x + 1}{2x^2 + 9x + 10}$ (c) $\dfrac{x^2 + 1}{2x^2 + 9x + 5}$

(b) $\dfrac{x^2 + 1}{2x^2 + 5x + 4}$ (d) $\dfrac{x^2 + 2x + 1}{2x^2 + 6x + 10}$

7. The solution set of $|5 - 3x| < 7$ is:

(a) $\left(-\infty, \frac{-2}{3}\right) \cup (4, \infty)$ (c) $(-1, 4)$

(b) $\left(-\infty, \frac{-2}{3}\right)$ (d) $\left(\frac{-2}{3}, 4\right)$

8. If $y = \frac{x}{x+1}$ then

(a) $x = \frac{y}{1-y}$ (c) $x = \frac{y+1}{y}$

(b) $x = \frac{y}{y-1}$ (d) $x = \frac{1-y}{y}$

9. $\frac{2}{x-1} - \frac{1}{x+2} =$

(a) $\frac{x-5}{x^2+x-2}$ (c) $\frac{x+5}{x^2+x-2}$

(b) $\frac{x+1}{x^2+x-2}$ (d) $\frac{x-1}{x^2+x-2}$

10. $(a+2b)^2 - 3(a+2b) - 10 =$

(a) $(a+2b-2)(a+2b+5)$ (c) $(a+2b+2)(a+2b-5)$

(b) $(a+2b+2)(a+2b+5)$ (d) None of the previous

11. $x^2 - z^2 - 6xy + 9y^2 =$

(a) $(x - 3y + z)(x - 3y - z)$ (c) $(x + 3y - z)(x - 3y - z)$

(b) $(x + 3y + z)(x - 3y - z)$ (d) None of the previous

12. 25 rabbits in a farm consume 90 kg of food every two days. How many kg of food would 10 rabbits consume in a week?

(a) 119 kg (c) 140 kg

(b) 112 kg (d) 126 kg

13. The solution set of $x^3 + 10x = 7x^2$ is:

(a) $\{2, 5\}$ (c) $\{2, 5, 3\}$

(b) $\{0, 2, 3\}$ (d) None of the previous

14. Prices in a sale were reduced by 35%. What was the price of a washing machine before the sale if its sale price is 92.950 KD?

(a) 135 KD
(b) 153 KD
(c) 145 KD
(d) 143 KD

15. When water freezes into ice, its volume is increased by 6%. What is the volume of water obtained when 768.5 cc of ice melts?

(a) 725 cc
(b) 735 cc
(c) 745 cc
(d) 722.39 cc

16. The side of a cube A is 2cm longer than the side of a cube B. If the surface area of A is 54 cm^2, find the volume of B.

(a) 1 cm^3
(b) 8 cm^3
(c) 125 cm^3
(d) None of the previous

17. The water in a hotel tank can last for 8 days if the hotel is full with guests. How long does the water last if only 40% of the hotel is occupied?

(a) 5 days
(b) 25 days
(c) 20 days
(d) 40 days

18. Let $f(x)=1-\frac{1}{x+1}$ and $g(x)=\frac{1}{f(x)}$. Find the composite function $f \circ g(x)$.

(a) $\frac{x+1}{2x+1}$
(b) $\frac{2x+1}{x+1}$
(c) 1
(d) x

19. A shopkeeper bought 50 kg of apples for 250 fils per kilo. He then discovered that 10 kg of them are damaged and cannot be sold. What is the selling price of the rest of the apples if the shopkeeper wants a total profit of 2.5 KD?

(a) 340 fils/kg
(b) 395 fils/kg
(c) 375 fils/kg
(d) 350 fils/kg

20. x workers can finish a job in y days. How many workers are needed to finish the job in $3y$ days?

(a) $3x$
(b) $3y$
(c) $\frac{x}{3}$
(d) $\frac{y}{3}$

جامعة الكويت
مركز التقييم والقياس

اختبارات القدرات الأكاديمية

ورقة الإجابة

مسلسل القاعة	113
قاعة الاختبار	قاعة رقم 20 مبنى 11 خ – كلية العلوم
اسم الطالب	أسم الطالب
الرقم المدني	281000100001
الرقم الجامعي	206115000
مواد الاختبار	3-Exam انجليزى ورياضيات وكيمياء
تاريخ الاختبار	السبت الموافق 3 - يوليو - 2010

Civil ID 281000100001

University ID 206115000

Room Code R125B310kh

صف الطالب Student Grade	التشعيب Track	الحضور Attendance	إصدار الامتحان Exam's Version
○ Grade 11 الصف	○ Science علمي	○ Present حاضر	Ⓐ Version A نموذج أ
○ Grade 12 الصف	○ Art ادبي	○ Absent غائب	Ⓑ Version B نموذج ب Ⓒ Version C نموذج ج Ⓓ Version D نموذج د

الاختبارات المطلوبة Required exams	
① English+Math.+Chem.	انجليزى + رياضيات + كيمياء
② English+Mathematics	انجليزى + رياضيات
③ English+Chemistry	انجليزى + كيمياء
④ Mathematics+Chemistry	رياضيات + كيمياء
⑤ English only	انجليزى فقط
⑥ Mathematics only	رياضيات فقط
⑦ Chemistry only	كيمياء فقط

إرشادات مهمة

USE A No. 2 PENCIL

1- يستخدم القلم الرصاص فقط في تظليل الدائرة المناسبة للإجابة
2- ظلل الدائرة المناسبة كاملة كما هو مبين في الاسفل
3- تأكد جيدا من إزالة تظليل أي دائرة عند المسح
4- عند تظليل الدائرة يراعى عدم الخروج عن حدود الدائرة

رقم المراقب

تضليل صحيح ●

تضليل خطأ ⊘⊗⊖⊙

Answers - English Exam — إجابات اختبار اللغة الانجليزية

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D E	19 -	A B C D E	37 -	A B C D E	55 -	A B C D E	73 -	A B C D E
2 -	A B C D E	20 -	A B C D E	38 -	A B C D E	56 -	A B C D E	74 -	A B C D E
3 -	A B C D E	21 -	A B C D E	39 -	A B C D E	57 -	A B C D E	75 -	A B C D E
4 -	A B C D E	22 -	A B C D E	40 -	A B C D E	58 -	A B C D E	76 -	A B C D E
5 -	A B C D E	23-	A B C D E	41 -	A B C D E	59 -	A B C D E	77 -	A B C D E
6 -	A B C D E	24 -	A B C D E	42 -	A B C D E	60 -	A B C D E	78 -	A B C D E
7 -	A B C D E	25 -	A B C D E	43 -	A B C D E	61 -	A B C D E	79 -	A B C D E
8 -	A B C D E	26 -	A B C D E	44 -	A B C D E	62 -	A B C D E	80 -	A B C D E
9 -	A B C D E	27 -	A B C D E	45 -	A B C D E	63 -	A B C D E	81 -	A B C D E
10 -	A B C D E	28 -	A B C D E	46 -	A B C D E	64 -	A B C D E	82 -	A B C D E
11 -	A B C D E	29 -	A B C D E	47 -	A B C D E	65 -	A B C D E	83 -	A B C D E
12 -	A B C D E	30 -	A B C D E	48 -	A B C D E	66 -	A B C D E	84 -	A B C D E
13 -	A B C D E	31 -	A B C D E	49 -	A B C D E	67 -	A B C D E	85 -	A B C D E
14 -	A B C D E	32 -	A B C D E	50 -	A B C D E	68 -	A B C D E		
15 -	A B C D E	33 -	A B C D E	51 -	A B C D E	69 -	A B C D E		
16 -	A B C D E	34 -	A B C D E	52 -	A B C D E	70 -	A B C D E		
17-	A B C D E	35 -	A B C D E	53 -	A B C D E	71 -	A B C D E		
18-	A B C D E	36 -	A B C D E	54 -	A B C D E	72 -	A B C D E		

Answers - Mathematics Exam — إجابات اختبار الرياضيات

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C ● E	6 -	● B C D E	11 -	● B C D E	16 -	● B C D E
2 -	A B C ● E	7 -	A B C ● E	12 -	A B C ● E	17 -	A B ● D E
3 -	A ● C D E	8 -	● B C D E	13 -	A B C ● E	18 -	● B C D E
4 -	● B C D E	9 -	A B ● D E	14 -	A B C ● E	19 -	A B ● D E
5 -	A B ● D E	10 -	A B ● D E	15 -	● B C D E	20 -	A B ● D E

Answers - Chemistry Exam — إجابات اختبار الكيمياء

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D E	6 -	A B C D E	11 -	A B C D E	16 -	A B C D E	21 -	A B C D E
2 -	A B C D E	7 -	A B C D E	12 -	A B C D E	17 -	A B C D E	22 -	A B C D E
3 -	A B C D E	8 -	A B C D E	13 -	A B C D E	18 -	A B C D E	23 -	A B C D E
4 -	A B C D E	9 -	A B C D E	14 -	A B C D E	19 -	A B C D E	24 -	A B C D E
5 -	A B C D E	10 -	A B C D E	15 -	A B C D E	20 -	A B C D E	25 -	A B C D E