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| 受験番号 | — | 氏名 | |
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令和7年度茨城県立産業技術短期大学校
一般入学者選考試験（前期）問題
【 数学Ⅰ・Ⅱ 】

＊ ＊ 受 験 上 の 注 意 事 項 ＊ ＊

- 1 係員の指示があるまでは、問題用紙に触れないこと。
- 2 解答用紙への記入は、別紙「記入上の注意」に従うこと。
- 3 問題用紙及び解答用紙に、受験番号及び氏名を記入すること。
- 4 解答は、すべて解答用紙に記入すること。
- 5 試験時間は、60分とする。なお、終了5分前には合図をする。
- 6 不正行為があったときは、その科目を0点とする。
- 7 試験が終了したとき、または、試験時間の途中で退場するときは、問題用紙を解答用紙の上に重ねて静かに退場すること。ただし、試験開始後15分以内の退場は認めない。
- 8 問題用紙及び解答用紙の印刷で不鮮明な箇所がある場合は、手を挙げて係員に申し出ること。
- 9 黒塗り箇所 は正の実数である。

1. 次の式を展開し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{コ}}$ に当てはまるものを答えなさい。

$$(1) \quad (3x + 7y)^2 = \blacksquare x^2 + \boxed{\text{ア}}\boxed{\text{イ}}xy + \blacksquare y^2$$

$$(2) \quad (2x - 5y)^3 = \blacksquare x^3 - \boxed{\text{ウ}}\boxed{\text{エ}}x^2y + \blacksquare xy^2 - 125y^3$$

$$(3) \quad (-x + 4y + 3)(x - 4y + 3) = -x^2 + \blacksquare xy - \boxed{\text{オ}}\boxed{\text{カ}}y^2 + 9$$

$$(4) \quad (3x - 2y)^2(9x^2 + 6xy + 4y^2) = \blacksquare x^4 - \boxed{\text{キ}}\boxed{\text{ク}}x^3y - \blacksquare xy^3 + \blacksquare y^4$$

$$(5) \quad (x - 1)(x - 2)(x - 4)(x - 5) = x^4 - \blacksquare x^3 + \boxed{\text{ケ}}\boxed{\text{コ}}x^2 - \blacksquare x + 40$$

2. 次の式を因数分解し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{コ}}$ に当てはまるものを答えなさい。

$$(1) \quad 3x^2 - xy - 10y^2 = (3x + \boxed{\text{ア}}y)(x - \boxed{\text{イ}}y)$$

$$(2) \quad 16x^3 + 1458 = 2(\blacksquare x + \blacksquare)(\blacksquare x^2 - \boxed{\text{ウ}}\boxed{\text{エ}}x + \blacksquare)$$

$$(3) \quad (x - 3y)^2 - 6(x - 3y) - 16 = (x - \blacksquare y + \boxed{\text{オ}})(x - \blacksquare y - \boxed{\text{カ}})$$

$$(4) \quad x^3y - x^3 - 2x^2y + 2x^2 - xy^3 + xy^2 + 2y^3 - 2y^2 = \\ = (x + y)(x - y)(x - \boxed{\text{キ}})(y - \boxed{\text{ク}})$$

$$(5) \quad (x^2 + 5x - 3)(x + 6)(x - 1) - 28 \\ = (x^2 + \blacksquare x + \blacksquare)(x^2 + \blacksquare x - \boxed{\text{ケ}}\boxed{\text{コ}})$$

3. 次の式を計算し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

$$(1) \quad \frac{\sqrt{3}-\sqrt{7}}{\sqrt{3}+\sqrt{7}} - \frac{\sqrt{3}+\sqrt{7}}{\sqrt{3}-\sqrt{7}} = \sqrt{\boxed{\text{ア}}\boxed{\text{イ}}}$$

$$(2) \quad \left(\frac{\sqrt{3}-\sqrt{7}}{\sqrt{3}+\sqrt{7}}\right)^2 + \left(\frac{\sqrt{3}+\sqrt{7}}{\sqrt{3}-\sqrt{7}}\right)^2 = \boxed{\text{ウ}}\boxed{\text{エ}}$$

4. $0^\circ \leq \theta \leq 180^\circ$ の条件で、次の方程式、不等式を解き、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

$$(1) \quad 2\sin^2 \theta + \sqrt{2}\cos \theta = 0 \quad \text{のとき、} \quad \cos \theta = -\sqrt{\frac{\boxed{\text{ア}}}{\boxed{\text{イ}}}} \quad \text{である。}$$

$$(2) \quad (2 + \sqrt{2})\sin^2 \theta - \cos \theta - 1 \geq 0 \quad \text{のとき、} \quad \boxed{\text{ウ}}\boxed{\text{エ}}^\circ \leq \theta \leq 180^\circ \quad \text{である。}$$

5. x, y が、 $5x^2 + y^2 = 1$ を満たすとき、空欄 $\boxed{\text{ア}} \sim \boxed{\text{エ}}$ に当てはまるものを答えなさい。

(1) $3x + 2y^2$ の最大値は、 $\frac{\boxed{\text{ア}}\boxed{\text{イ}}}{40}$ である。

(2) $3x + 2y^2$ の最小値は、 $-\frac{\boxed{\text{ウ}}\sqrt{\boxed{\text{エ}}}}{5}$ である。

6. m を実数とし、2 次方程式 $x^2 - 2x + m = 0$ の 2 つの解 α, β が、 $3\alpha = \beta + 1$ を満たすとき、空欄 $\boxed{\text{ア}} \sim \boxed{\text{エ}}$ に当てはまるものを答えなさい。

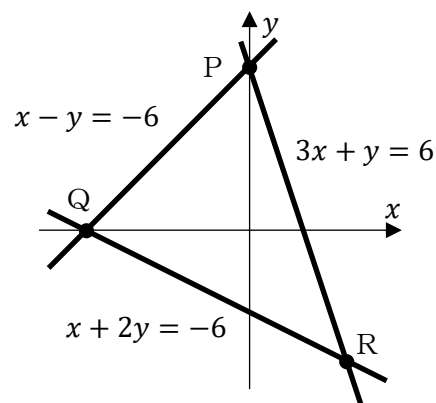
(1) 2 つの解は、 $\alpha = \frac{\boxed{\text{ア}}}{\blacksquare}$ 、 $\beta = \frac{\boxed{\text{イ}}}{\blacksquare}$ である。

(2) m の値は、 $\frac{\boxed{\text{ウ}}\boxed{\text{エ}}}{\blacksquare\blacksquare}$ である。

7. x, y が 3 つの不等式 $x - y \geq -6$, $3x + y \leq 6$, $x + 2y \geq -6$ を同時に満たすとき、3 つの方程式の交点 P, Q, R で囲まれた三角形の領域を表す。このとき、空欄 ア ~ エ に当てはまるものを答えなさい。

(1) $x - 2y$ の最小値は、 $-\text{ア イ}$ である。

(2) $x - 2y$ の最大値は、 $\frac{\text{ウ エ}{5}$ である。



参考図

8. 次の連立方程式を解いたとき、空欄 ア ~ エ に当てはまるものを答えなさい。

(1)
$$\begin{cases} 3^x + 3^{y-1} = 54 \\ 3^{x+1} - 3^{y-2} = 72 \end{cases}$$

この連立方程式の解は、 $x = \text{ア}$, $y = \text{イ}$ となる。

(2)
$$\begin{cases} \log_2 x + \log_3 y^3 = 8 \\ \log_2 x^2 + \log_3 y = 6 \end{cases}$$

この連立方程式の解は、 $x = \text{ウ}$, $y = \text{エ}$ となる。

9. 関数 $y = 3\sqrt{2}\cos\theta - 3\sin^2\theta + 5$ ($0 \leq \theta \leq \pi$) について、次の空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

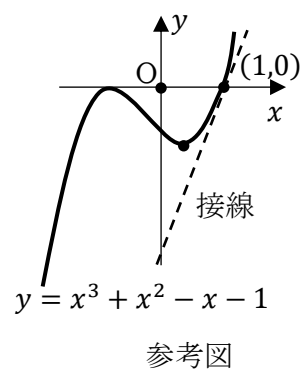
(1) この関数が最小となるときの y は、 $\frac{\boxed{\text{ア}}}{\boxed{\text{イ}}}$ である。

(2) この関数が最小となるときの θ は、 $\frac{\boxed{\text{ウ}}}{\boxed{\text{エ}}}\pi$ である。

10. 関数 $y = x^3 + x^2 - x - 1$ のグラフについて、次の空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

(1) グラフ上の点 $(1,0)$ における、接線の方程式は、 $y = \boxed{\text{ア}}x - \boxed{\text{イ}}$ である。

(2) 極小値は、 $-\frac{\boxed{\text{ウ}}\boxed{\text{エ}}}{27}$ である。



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【 数学Ⅰ・Ⅱ 】

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1. 次の式を展開し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{コ}}$ に当てはまるものを答えなさい。

$$(1) \quad (2x + 5y)(2x - 5y) = \blacksquare x^2 - \boxed{\text{ア}} \boxed{\text{イ}} y^2$$

$$(2) \quad (2x - y)^3 = \blacksquare x^3 - \boxed{\text{ウ}} \boxed{\text{エ}} x^2 y + \blacksquare xy^2 - y^3$$

$$(3) \quad (x - 2y - 3)^2 = x^2 - \blacksquare xy + \blacksquare y^2 - \blacksquare x + \boxed{\text{オ}} \boxed{\text{カ}} y + 9$$

$$(4) \quad (2x + y)^2(4x^2 - 2xy + y^2) = \boxed{\text{キ}} \boxed{\text{ク}} x^4 + \blacksquare x^3 y + \blacksquare xy^3 + y^4$$

$$(5) \quad (2x - 1)(2x + 1)^2(2x + 3) = 16x^4 + \boxed{\text{ケ}} \boxed{\text{コ}} x^3 + \blacksquare x^2 - \blacksquare x - 3$$

2. 次の式を因数分解し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{コ}}$ に当てはまるものを答えなさい。

$$(1) \quad 7x^2 - 11xy - 6y^2 = (7x + \boxed{\text{ア}} y)(x - \boxed{\text{イ}} y)$$

$$(2) \quad x^2 + 6xy + 9y^2 + 6x + 18y + 5 = (x + \blacksquare y + 1)(x + \boxed{\text{ウ}} y + \boxed{\text{エ}})$$

$$(3) \quad 3x^2 + 8xy + 10x + 4y^2 + 8y + 3 = (\boxed{\text{オ}} x + \blacksquare y + \boxed{\text{カ}})(x + \blacksquare y + 3)$$

$$(4) \quad x^4 - 3x^2 + 1 = (x^2 + x - \boxed{\text{キ}})(x^2 - x - \boxed{\text{ク}})$$

$$(5) \quad (x^2 - 3x - 2)(x + 3) + 4x = (x + 1)(x + \boxed{\text{ケ}})(x - \boxed{\text{コ}})$$

3. 次の式を計算し、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

$$(1) \quad \frac{\sqrt{3}-\sqrt{11}}{\sqrt{3}+\sqrt{11}} + \frac{\sqrt{3}+\sqrt{11}}{\sqrt{3}-\sqrt{11}} = -\frac{\boxed{\text{ア}}}{\boxed{\text{イ}}}$$

$$(2) \quad \left(\frac{\sqrt{3}-\sqrt{11}}{\sqrt{3}+\sqrt{11}}\right)^2 - \left(\frac{\sqrt{3}+\sqrt{11}}{\sqrt{3}-\sqrt{11}}\right)^2 = -\frac{\boxed{\text{ウ}}\sqrt{\boxed{\quad}}}{\boxed{\text{エ}}}$$

4. 放物線 $y = x^2 - 4x - 3$ と、直線 $y = -2x - a$ があるとき、空欄 $\boxed{\text{ア}}$ ～ $\boxed{\text{エ}}$ に当てはまるものを答えなさい。

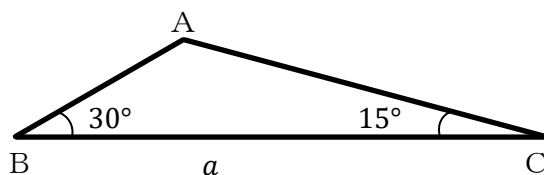
(1) $a = 1$ のとき、2つのグラフの共有点の座標は、

$$(x, y) = \left(\boxed{\quad} + \sqrt{\boxed{\quad}}, -\boxed{\text{ア}} - \boxed{\text{イ}}\sqrt{\boxed{\quad}} \right) \text{ および、}$$

$$(x, y) = \left(\boxed{\quad} - \sqrt{\boxed{\quad}}, -\boxed{\quad} + \boxed{\quad}\sqrt{\boxed{\quad}} \right) \text{ である。}$$

(2) 2つのグラフの共有点が1つのとき、 a の値は、 $a = \boxed{\text{ウ}}$ であり、その時の座標は、 $(x, y) = \left(\boxed{\quad}, -\boxed{\text{エ}} \right)$ である。

5. 三角形ABCがあり、 $\angle ABC=30^\circ$ 、 $\angle BCA=15^\circ$ 、 $BC=a$ のとき、空欄 ア エ に当てはまるものを答えなさい。



参考図

- (1) AB、CAの長さは、

$$AB = \frac{(\sqrt{\text{ア}} - 1)}{2} a, \quad CA = \frac{\sqrt{\text{イ}}}{2} a \text{ である。}$$

- (2) 三角形ABCの面積Sは、 $S = \frac{\sqrt{\text{ウ}} - 1}{\text{エ}} a^2$ である。

6. m を実数とし、2 次方程式 $x^2 + (m+1)x + \frac{1}{8} = 0$ が 2 つの虚数解を持つとき、空欄 ア エ に当てはまるものを答えなさい。

(1) m の取りうる範囲は、 $-\text{ア} - \frac{\sqrt{\text{イ}}}{2} < m < -\text{ア} + \frac{\sqrt{\text{イ}}}{2}$

- (2) m が (1) の範囲内の整数であったとき、 $m = -\text{ウ}$ であり、虚数解は、

$$x = \pm \frac{\sqrt{\text{エ}}}{4} i \text{ である。}$$

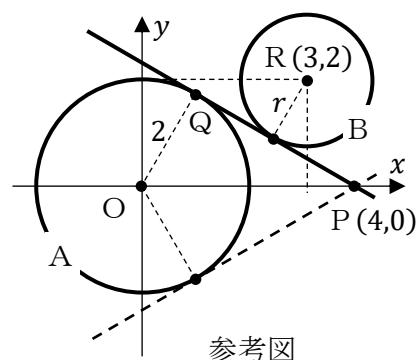
7. 点P (4,0) から円A : $x^2 + y^2 = 4$ に引いた 2 本の接線があるとき、
空欄 $\boxed{\text{ア}} \sim \boxed{\text{エ}}$ に当てはまるものを答えなさい。

- (1) 円Aと2本の接線との接点のうち、第一象限

にある接点は $Q = (\boxed{\text{ア}}, \sqrt{\boxed{\text{イ}}})$ である。

- (2) (1) の 2 本の接線のうち、円Aと第一象限で接点を持つ直線と、点R (3,2) を中心とする半径 r の円Bが接するとき、円Bの半径は、

$$r = \sqrt{\boxed{\text{ウ}}} - \frac{1}{\boxed{\text{エ}}} \text{ である。}$$



8. 次の連立方程式を解いたとき、空欄 $\boxed{\text{ア}} \sim \boxed{\text{エ}}$ に当てはまるものを答えなさい。

(1)
$$\begin{cases} 3^{x-1} + 3^{y-1} = 12 \\ 3^{x+y-2} = 27 \end{cases}$$

ただし、 $x < y$ とする。

この連立方程式の解は、 $x = \boxed{\text{ア}}$ 、 $y = \boxed{\text{イ}}$ である。

(2)
$$\begin{cases} 2^y \times 2^{-x} = 64 \\ \log_2 x + \log_2 y = 3 \log_2 3 \end{cases}$$

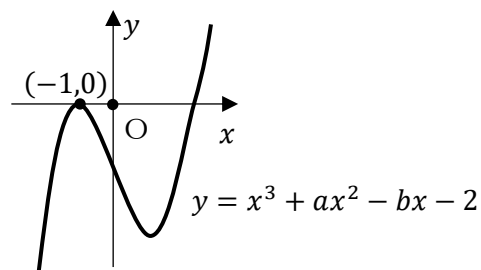
この連立方程式の解は、 $x = \boxed{\text{ウ}}$ 、 $y = \boxed{\text{エ}}$ である。

9. $0 \leq \theta < \frac{\pi}{2}$ のとき、次の空欄 ア ～ エ に当てはまるものを答えなさい。

(1) $3 \sin 2\theta - \cos \theta = 0$ のとき、 $\sin \theta = \frac{\text{ア}}{\text{イ}}$ である。

(2) $\cos 2\theta - \sin \theta = 0$ のとき、 $\theta = \frac{\text{ウ}}{\text{エ}} \pi$ である。

10. 関数 $y = x^3 + ax^2 - bx - 2$ のグラフは、
 $x = -1$ で極大値 0 となる。
 次の空欄 ア ～ エ に当てはまる
 ものを答えなさい。



参考図

(1) このとき、 $a = \text{ア}$ 、 $b = \text{イ}$ である。

(2) (1) の関数と x 軸で囲まれた部分の面積 S は、 $S = \frac{\text{ウ} \text{エ}}{4}$ である。

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令和 7 年度茨城県立産業技術短期大学校
一般入学者選考試験（前期）問題
【英語コミュニケーションⅠ】

* * 受 験 上 の 注 意 事 項 * *

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- 6 試験が終了したとき、または、試験時間の途中で退場するときは、問題用紙を解答用紙の上に重ねて静かに退場すること。ただし、試験開始後15分以内の退場は認めない。
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問1 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

- (1) The horse was so strong it could () over a 2-meter fence.

ア jumped イ jump ウ jumping エ has jumped

- (2) Scientists found that the new element () many new properties.

ア do contain イ contain ウ contained エ is containing

- (3) The factory () a great deal of air and noise pollution in a day.

ア produces イ produce ウ gave エ give

- (4) The police could not () the suspect because there wasn't sufficient evidence.

ア holden イ hold ウ is holding エ held

- (5) Coffee prices have () so high because of transport costs.

ア rose イ rise ウ risen エ been risen

問2 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

- (1) There will be a season sale () the end of this month.

ア in イ under ウ on エ at

- (2) The vases were set nicely () the table for everyone to see them.

ア through イ over ウ on エ in

- (3) A police box is located just () the corner.

ア over イ around ウ under エ on

- (4) There have been many fires in this laboratory () the year.

ア throughout イ beside ウ between エ against

- (5) Trees have been placed near the road to prevent sand () covering it.

ア to イ on ウ from エ into

問3 次の日本語にあうように、()の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) この道をまっすぐ行って、2つめの交差点を右に曲がります。

Go straight down this street () turn right at the second intersection.

ア but イ not ウ and エ or

(2) 私のお父さんは大きなレストランを営んでいる。

My father () a large restaurant.

ア make イ does ウ likes エ runs

(3) 私の弟は今月に高校を卒業します。

My younger brother graduates from high school ().

ア in a month イ next month ウ last month エ this month

(4) 彼は5年前ガソリンスタンドを2軒所有していた。

He owned 2 gas stations 5 years ().

ア ago イ later ウ in エ after

(5) 父は長時間運転の後で疲れたように見えた。

My father () tired after the long drive.

ア looking イ seem ウ looked エ was looked

問4 次の各英文の下線部と同じような意味を表す語句をア～エから選び、記号を答えなさい。

(1) The customer asked for an extra week to look over the contract.

ア review イ vision ウ reviewed エ looked at

(2) The students could not comprehend the teacher's explanation.

ア understand イ know ウ help エ think

(3) The cost of turning on the machine was too expensive for the city.

ア building イ fixing ウ repairing エ activating

(4) Schools need to give students more opportunities to study overseas.

ア help イ use ウ provide エ send

(5) My teacher looked angry when I told her I didn't finish my homework.

ア appeared イ appears ウ is エ can be

問5 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) () it possible to receive regular e-mails?

ア Can イ Does ウ Is エ When

(2) () is the nearest rest stop?

ア When イ Where ウ Why エ What

(3) () can't you do the exercise properly?

ア Who イ What ウ Why エ Where

(4) () serious is the problem?

ア How イ Where ウ Who エ When

(5) Do you know () the room will be available?

ア what イ can ウ will エ when

問6 次のAとBの会話を読み、()の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) A: Where is the library located?

B: Oh, it's () the high school.

ア under イ near ウ between エ on

(2) A: Can you tell me something about this place?

B: I'm sorry, (). I don't know much about it.

ア I won't イ I don't ウ I can't エ I'm not

(3) A: The top floor has a great observation room.

B: I (). You can see for miles around!

ア know イ see ウ yes, it is エ don't know

(4) A: I can't find the butter.

B: You'll see it () the eggs and the cheese, which are placed right next to each other.

ア over イ in ウ between エ around

(5) A: I think living in the city is the best.

B: I (). It's too noisy and you can't see any nature.

ア agree イ disagree ウ cannot エ see

問7 次のJimとJackの会話を読み、()の中に入る最も適切なものをア～エから選び、記号を答えなさい。

- Jim : Jack, how is the planning going for the (1) school trip to Europe?
Jack : Actually, Jim, it's going (2) than I would like.
Jim : What (3) to be the problem?
Jack : Every hotel I have contacted in Switzerland (4) the number of open rooms we need.
Jim : How about the reservations in (5)?
Jack : Oh, they are good. We will have enough rooms for all of the students.
Jim : That's good news. However, we might need to go somewhere else if we can't reserve enough rooms in Switzerland.

- | | | | | | | | | |
|-----|---|------------|---|---------------|---|------------|---|----------|
| (1) | ア | downcoming | イ | upcoming | ウ | going | エ | shopping |
| (2) | ア | slower | イ | better | ウ | faster | エ | after |
| (3) | ア | seems | イ | seem | ウ | seemed | エ | is seem |
| (4) | ア | not have | イ | does not have | ウ | do not has | エ | may have |
| (5) | ア | America | イ | China | ウ | India | エ | Germany |

問8 次の文章を読み、あとの設問に対して最も適切なものをア～エから選び、記号を答えなさい。

A climate is defined as an area that has a consistent weather system. Climate is a complicated pattern. It is affected by many things. Nearness to the North or South Pole or to the equator is important. If you live near one of the poles, you live in a cold climate. The reason for this is that the sun's rays do not shine directly down. If you live near the equator, you live in a warm or very hot climate. This is the region where the sun shines almost straight down. You may live in a hot, dry area where little rain falls. This is a desert. On the other hand, some areas receive a lot of rain such as a rain forest. Climates are different depending on winds, mountains and bodies of water.

(1) What is an area with the same weather called?

- ア Area
- イ Climate
- ウ Space
- エ Pole

(2) According to the passage, what will areas close to the poles most likely be?

- ア Hot
- イ Warm
- ウ Cold
- エ Wet

(3) Which word describes the middle of the Earth?

- ア North Pole
- イ South Pole
- ウ Prime Meridian
- エ Equator

(4) What would a desert most likely be?

ア Dry

イ Wet

ウ Rainy

エ Cool

(5) According to the passage, what might influence a climate area?

ア Sun

イ Moon

ウ Mountain

エ Desert

問9 次の文章を読み、文中の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

Meat has been an important part of the human diet. In fact, many experts in ancient human culture say that eating meat (1) to the development of the human brain. At first humans hunted animals (2) meat but once agriculture was established, many cultures started raising animals for meat. Such animals were pigs, chickens and sheep. These animals were easy to keep and had many offspring. However, before the invention of refrigeration it was very difficult to keep meat fresh and safe to eat. Therefore, humans (3) a few methods to preserve meat. Of course (4) meat over a fire or boiling it allowed people to keep meat for a few days. Letting meat sit in salt, which is called curing, and smoking meat not only preserved the meat but also gave it flavor. Finally, drying meat was the best way to preserve meat so that it (5) a long time. We know this type of meat as “jerky”.

- | | | | | |
|-----|----------------|---------------|----------------|---------------|
| (1) | ア contributing | イ contributes | ウ contributed | エ contribute |
| (2) | ア to get | イ to got | ウ get | エ getting |
| (3) | ア developed | イ can develop | ウ will develop | エ development |
| (4) | ア cooked | イ did cook | ウ cooking | エ cooker |
| (5) | ア should last | イ lasts | ウ would last | エ lasting |

問 10 次の文章を読み、あとの設問に対して最も適切なものをア～エから選び、記号を答えなさい。

Last summer I visited my friend's home in America. He lived in a very large house that had two floors and a basement. It was white with green trim and it had a green roof. Let me describe it to you.

On the first floor was the living room, dining room and kitchen. There was another room which my friend called the family room. I thought to myself that houses in my country do not have family rooms. The kitchen was very large. There was even a dining table in the kitchen. My friend told me that they only eat in the main dining room on special occasions and they eat every-day meals in the kitchen. A restroom was located next to the family room.

The second floor was for the bedrooms and the main bathroom. I thought it was strange that the toilet and bath were in the same room. His parents had the largest bedroom, while he and his sister had smaller rooms. There was one more room for guests. That's where I slept.

The basement was the most exciting room in the house. They had a huge TV, a billiard table, a dart board and a place for playing music. My friend's father even had a small bar for when his friends came over to watch sporting events. In the future, I would like to build a house similar to my friend's.

(1) What is the color of the roof?

- ア Red
- イ Orange
- ウ Green
- エ White

(2) Which floor is the kitchen on?

- ア First floor
- イ Second floor
- ウ Basement
- エ Garage

(3) When might the family eat in the main dining room?

ア Daily

イ On the weekend

ウ Christmas

エ Dinner time

(4) What was strange about the bathroom?

ア There was no toilet.

イ The bath and toilet were together.

ウ The bath and toilet were separate.

エ There was no bath.

(5) Where might people go to sing karaoke?

ア The basement.

イ The family room.

ウ The living room.

エ The guest room.

| | | | |
|------|---|----|--|
| 受験番号 | — | 氏名 | |
|------|---|----|--|

令和7年度茨城県立産業技術短期大学校
一般入学者選考試験（中期）問題
【英語コミュニケーションⅠ】

* * 受 験 上 の 注 意 事 項 * *

- 1 係員の指示があるまでは、問題用紙に触れないこと。
- 2 問題用紙及び解答用紙に、受験番号及び氏名を記入すること。
- 3 解答は、すべて解答用紙に記入すること。
- 4 試験時間は、60分とする。なお、終了5分前には合図をする。
- 5 不正行為があったときは、その科目を0点とする。
- 6 試験が終了したとき、または、試験時間の途中で退場するときは、問題用紙を解答用紙の上に重ねて静かに退場すること。ただし、試験開始後15分以内の退場は認めない。
- 7 問題用紙及び解答用紙の印刷で不鮮明な箇所がある場合は、手を挙げて係員に申し出ること。

問1 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) Rice is () in many Asian countries.

ア grow イ sell ウ cultivated エ maked

(2) Many populations are () around the world because the cost of raising children is too high.

ア shrink イ shrinking ウ shrunk エ have been shrinking

(3) Smartphones () many more functions than the cell phones of the past.

ア have イ had ウ did have エ are having

(4) Many people in the world have () their desire to learn a foreign language.

ア express イ expressing ウ expressed エ expression

(5) The goal of the government () been to provide the best health care at affordable prices.

ア is always イ will always ウ can always エ has always

問2 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) There is a convenience store () from the parking garage.

ア on イ across ウ around エ in front of

(2) Go straight down this road and () the bridge.

ア in イ on ウ over エ through

(3) Let's go to the bowling alley () we've finished watching the movie.

ア after イ before ウ then エ later

(4) We need () 5 kilograms of meat for a group of 20 people.

ア under イ about ウ through エ with

(5) The intruder entered the bank () 4:30 P.M.

ア over イ in ウ around エ on

問3 次の日本語にあうように、()の中に入る最も適切なものをア～エから選び、記号を答えなさい。

(1) 富士山は日本の活火山です。

Mt. Fuji is an () volcano in Japan.

ア popular イ active ウ happy エ dead

(2) 私の家族は3年前にヨーロッパへ旅行しました。

My family took a trip to Europe 3 years () .

ア before イ later ウ ago エ after

(3) 価格は新型コロナウイルス感染症以前よりもはるかに高くなっています。

Prices are () higher now than before Covid-19 pandemic.

ア some イ many ウ rather エ much

(4) 多くの国が夏時間制度の導入を検討しています。

() countries are considering adopting a daylight savings system.

ア Some イ Many ウ Rather エ Much

(5) ハンバーガーはおそらく最も象徴的なアメリカ料理です。

The hamburger is () the most iconic American food.

ア mostly イ simply ウ logically エ probably

問4 次の各英文の下線部と同じような意味を表す語句をア～エから選び、記号を答えなさい。

- (1) When I don't know the meaning of a word, I look up the meaning in my dictionary.

ア find イ go over ウ learn エ make up

- (2) You should shut off the engine before you put gas in the car.

ア close イ sell ウ turn off エ take off

- (3) There are a variety of DVD's you can choose from at this video store.

ア much イ few ウ a little エ many

- (4) Checkers is one of the earliest games of strategy.

ア newest イ oldest ウ best エ strategic

- (5) Chinese is one of the most difficult languages to learn.

ア simplest イ easiest ウ hardest エ most dangerous

問5 次の各英文の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

- (1) () brand contains the least amount of sugar?

ア This イ Where ウ Which エ Is

- (2) () will they hold the event?

ア When イ Do ウ Are エ Which

- (3) () do the guests prefer, coffee or tea?

ア Where イ When ウ Why エ Which

- (4) () the conference in England this year?

ア Do イ Is ウ Will エ Can

- (5) () they know how to operate the system?

ア Can イ Is ウ Do エ Had

問6 次のAとBの会話を読み、()の中に入る最も適切なものをア～エから選び、記号を答えなさい。

- (1) A: Oh, no! Your dog ran off!
B: Yes, that happens a lot, () he knows the way home.
- ア but イ because ウ or エ then
- (2) A: Can you catch a lot of big fish here?
B: (), not really. The water level is too shallow.
- ア Yes イ Maybe ウ No エ Not
- (3) A: I love that restaurant. They have such great food.
B: Yes, I agree. Although, it's () that they're closing next year.
- ア too bad イ too good ウ too that エ too happy
- (4) A: Could you help me solve this equation?
B: Sure, I'll help you the () I can.
- ア best イ worst ウ least エ most
- (5) A: I haven't been feeling well these past few days.
B: You () want to go to that new emergency clinic.
- ア would イ should ウ could エ might

- (2) A: Can you catch a lot of big fish here?
B: (), not really. The water level is too shallow.
- ア Yes イ Maybe ウ No エ Not

- (3) A: I love that restaurant. They have such great food.
B: Yes, I agree. Although, it's () that they're closing next year.
- ア too bad イ too good ウ too that エ too happy

- (4) A: Could you help me solve this equation?
B: Sure, I'll help you the () I can.
- ア best イ worst ウ least エ most

- (5) A: I haven't been feeling well these past few days.
B: You () want to go to that new emergency clinic.
- ア would イ should ウ could エ might

問7 次の Sam と Penny の会話を読み、() の中に入る最も適切なものをア～エから
選び、記号を答えなさい。

Sam : There's a concert this Saturday. (1) to go?
Penny : (2) my schedule. It looks like I'm free.
Sam : Great, I'll order the tickets.
Penny : (3) does the concert start?
Sam : I think around 8:30.
Penny : Maybe we could go to that new Mexican restaurant near the concert hall?
Sam : Oh, that sounds good. I'll (4) around 6:00.
Penny : OK, I'll (5) .

- | | | | | | | | | |
|-----|---|--------------|---|----------------|---|----------------|---|-----------------|
| (1) | ア | Can you like | イ | Would you like | ウ | Could you like | エ | Should you like |
| (2) | ア | I check | イ | Will I check | ウ | Let me check | エ | You check |
| (3) | ア | When time | イ | How time | ウ | What time | エ | Is time |
| (4) | ア | pick you up | イ | see you up | ウ | get you up | エ | tell you up |
| (5) | ア | see you then | イ | see you there | ウ | see you | エ | see you again |

問8 次の文章を読み、あとの設問に対して最も適切なものをア～エから選び、記号を答えなさい。

National flags are the primary symbols of the nations of the world. National flags usually consist of colors and symbols that represent specific characteristics of the nation. Colors can represent certain characteristics such as purity, justice, perseverance and progress. Symbols can represent aspects of each country like political districts, natural treasures or the religious background of the country. The stars on the American flag represent the 50 states. Crosses and crescent moon symbols state whether the country is of a Christian or Muslim religious background. National flags also share similarities based on regions and history. Most European countries have flags with three color stripes either going vertically or horizontally. Countries like Australia, New Zealand, Fiji contain the UK Union Jack symbol which represents that they were once British colonies.

(1) Which word can be used in place of “primary”?

- ア Character
- イ Only
- ウ Main
- エ Solitary

(2) According to the reading, what do the colors on a flag usually represent about a country?

- ア The country’s population
- イ The states in the country
- ウ The characteristics of the country
- エ The type of government

(3) What do the stars on the American flag represent?

- ア The number of states
- イ The number of people
- ウ The number of presidents
- エ The number of major cities

(4) If the flag contains a cross symbol, then what is most likely true about the country?

ア Its government has a king.

イ It believes in Christian religion.

ウ It believes in Islam religion.

エ It's a fun country to visit.

(5) If the flag has a Union Jack symbol, then what is most likely true about the country?

ア It was once a colony of France.

イ It was once a colony of Spain.

ウ It was once a colony of USA.

エ It was once a colony of UK.

問9 次の文章を読み、文中の（ ）の中に入る最も適切なものをア～エから選び、記号を答えなさい。

If humans (1) to colonize another place in this solar system, the planet Mars would be the best place to start. According to American astrophysicist, Neil DeGrasse Tyson, the planet Mars (2) the most Earth-like qualities. The day-cycle of the planet is roughly 24 hours. It (3) on its axis which means it has seasons. There is even water on the planet in frozen form. Its gravity level is somewhat less than that of Earth, so humans will feel like superheroes as they (4) to jump higher or lift a large amount of weight. However, generations born on Mars might have difficulty experiencing a trip to Earth because of the stronger gravity. Scientists (5) terraforming Mars. Terraforming is the process of changing a planet into a living planet with liquid water, plant life and a breathable atmosphere.

- | | | | | |
|-----|------------------------|-----------|-----------------------|----------------|
| (1) | ア were | イ was | ウ is | エ does |
| (2) | ア have | イ has | ウ had been | エ is |
| (3) | ア turn | イ turns | ウ turned | エ turning |
| (4) | ア can be able | イ be able | ウ had been able | エ will be able |
| (5) | ア is also considered | | イ are also considered | |
| | ウ are also considering | | エ is also considering | |

問 10 次の文章を読み、あとの設問に対して最も適切なものをア～エから選び、記号を答えなさい。

It's possible that famous American author Ralph Waldo Emerson inspired the idea of the American road trip with his statement "It's not the destination, it's the journey". The "road trip" was a very popular form of vacation for many American families from the 1950's to the 1970's. A road trip was a vacation where a family would decide a destination and choose a route to the destination that contained several sites the family wished to visit during the travel to the destination or on the return trip. This may seem hard to believe now since modern cars are very compact, but American cars at the time had a lot of comfortable space inside to accommodate even large families that had 3 or even 4 children.

Families would begin their journey on the decided day and drive down the highways stopping at the planned sightseeing spots. They would also stop at other points that caught their attention. If the father, who was usually the main driver, got tired, the family would stop for the night at a motel. A motel, also called motor hotel, was a small hotel designed for travelers that usually didn't require a reservation. After a few days of driving, the family would reach their destination. Finally, the family would take a different route back and see new places. Upon returning home the family would have gained a new perspective on their nation and have many memories.

Today, road trips are a thing of the past. Families seem more intent on getting to their destination as quickly as they can. Smaller cars, cheaper airline tickets and the expense of travelling long distances by car have influenced this idea. It's unfortunate though as future generations will miss out on seeing the unique places in their country.

(1) When did many American families take road trips?

- ア In the 1920's.
- イ In the 1940's.
- ウ In the 1960's.
- エ In the 1990's.

(2) Which form of transportation is used for road trips?

- ア Boat
- イ Car
- ウ Airplane
- エ Bicycle

(3) Choose the best reason why road trips were popular in America.

ア Because people could visit a lot of interesting places.

イ Because people could stay in a motel.

ウ Because people could eat at many different restaurants.

エ Because they were a cheap vacation.

(4) According to the reading, which family member did the most driving?

ア Grandfather

イ Mother

ウ Father

エ Dog

(5) Choose the best reason why people today don't take road trips.

ア Because it's not fun anymore.

イ Because people want to get to their destination quickly.

ウ Because people want to see famous sites from the air.

エ Because the roads are closed in many places.